Supplementary methods

Data S1. Supplementary literature search and screening record. *Purpose and scope*. A supplementary PubMed database search was conducted to document literature retrieval and screening. The protocol was specified before literature retrieval. Original literature retrieval and screening records were unavailable, so these records do not reconstruct the initial literature selection or establish systematic coverage. Data S1 and Table SI provide the PubMed database search and its screening records; however, not all historical sources were used to prepare the present review.

Database. The PubMed database was accessed through the National Center for Biotechnology Information Entrez-utilities Application Programming Interface in September 2026. Publication-date filter was set from January 1900 to June 2026. No language or publication-type retrieval filter was applied. The exact query was as follows:

('Breast Neoplasms'[MeSH Terms] OR 'breast cancer'[Title/Abstract] OR 'breast carcinoma'[Title/Abstract] OR TNBC[Title/Abstract]) AND (exosom*[Title/Abstract] OR 'extracellular vesicle*'[Title/Abstract] OR microvesicle *[Title/Abstract]) AND (microRNA*[Title/Abstract] OR miRNA*[Title/Abstract] OR miR[Title/Abstract]) AND (resistan*[Title/Abstract] OR chemotherap*[Title/Abstract] OR neoadjuvant[Title/Abstract] OR doxorubicin[Title/Abstract] OR adriamycin[Title/Abstract] OR cisplatin[Title/Abstract] OR paclitaxel[Title/Abstract] OR docetaxel[Title/Abstract] OR therapeutic*[Title/Abstract] OR delivery[Title/Abstract]) AND ('1900/01/01'[Date - Publication] : '2026/06/30'[Date-Publication])

Screening criteria. The focused primary question comprised original breast cancer studies of EV-associated miRNAs in cytotoxic-treatment exposure or response, patient treatment-response biomarkers or miRNA/anti-miRNA delivery in an EV or EV-derived platform. Broader breast cancer models were considered to be eligible; TNBC specificity and causal strength were evaluated separately. Records regarding endocrine or other targeted-treatment contexts, other transported RNA classes, diagnostic-only or non-treatment biology, toxicity in other organs, reviews, notices, preprints and indexed retracted reports were separated from the focused candidate set. Such separation did not prevent the use of independently selected sources as background in a narrative review.

Screening procedure. Retrieved titles and publication-type metadata were examined, with abstracts assessed when a record appeared relevant or its scope needed clarification. The authors made the screening decisions and interpreted the evidence. Any differences in opinion were resolved by an additional author. This did not constitute independent duplicate screening and no inter-rater analysis was performed. Abstract assessment included 11 records initially triaged using titles and publication metadata. Indexed article types were used to identify reviews, preprints, corrections and retractions. Publisher status was not independently checked for every uncited candidate. The ledger records relevance decisions and their basis, rather than risk of bias.

The supplementary search and screening counts are summarized in Table SII.

Interpretation. Counts describe bibliographic records, not experiments, cohorts or effect estimates. Table SII reports retrieval, title screening, abstract assessment, candidate categories and records outside the focused candidate set. The 103 candidates were not all appraised in full text or added to the evidence tables; candidates outside the narrative synthesis are not additional evidence-graded studies. The narrative synthesis cites 68 references: 30 matched the supplementary query by DOI, including 20 focused candidates and 10 contextual sources. The other 38 references include broader clinical, methodological and contextual sources outside this query. A bibliography match indicates citation, not completed full-text appraisal or assignment of an evidence tier. These counts do not demonstrate exhaustive coverage. Narrative selection for discussion was based on the authors' judgment of relevance and discussion value, without a prespecified scoring threshold. Any differences in opinion were resolved by an additional author. Reasons for not selecting individual studies were not recorded. The record-level candidate screening decisions in Table SI therefore do not constitute a complete historical inclusion/exclusion log for the narrative synthesis.

Table SI is the accompanying Word-format ledger, containing all 443 records, PubMed database identifiers, DOI, title, indexed publication types, assessment stage, decision and reason. The underlying XML retrieval records, ESearch response and timestamped protocol are held by the authors. The categories were as follows: F, treatment-associated EV-miRNA or drug-response investigation; B, patient treatment-response biomarker; T, EV-based miRNA delivery; C, outside the focused primary question; R, non-primary report; N, correction/retraction notice; P, preprint; RET, indexed retracted publication. Candidate categories describe topic, not evidence quality.

Data S2. Source-specific RNA-localization appraisal. *Scope*. Each entry in Table I was checked for RNase and proteinase K treatment and membrane-disruption comparisons in materials accessible in September 2026. An affirmative entry requires an identifiable procedure. NR-MS means not reported in the main text and supplementary material examined. NR-PR denotes a provisional finding from a public reproduction pending publisher-version and supplementary verification. NV denotes unavailable full methods. None establishes that an assay was never performed. RNase pretreatment, EV-marker blots, dye uptake, loading images and intracellular carboxyfluorescein (FAM) signals alone do not establish intravesicular miRNA localization. This appraisal included published assays; no new protection experiments were undertaken.

miR-423-5p. i) Source. https://doi.org/10.2174/1389200220666190819151946

ii) Materials examined. Public reproduction of the published main article, pages 804-814, accessed at https://www.scribd.com/document/1065483258/0008F. The title, authors and DOI match the bibliographic record. The publisher PDF and any separate supplementary material were not obtained.

iii) Appraisal. The reproduced methods did not identify RNase, Proteinase K or a paired membrane-disruption protection experiment (NR-PR). Recipient mimic/inhibitor treatment during exposure to resistant-cell EV preparations

is described; it does not isolate donor-packaged miRNA causality. The Tier 2 assessment is provisional because the publisher version and any separate supplementary methods were unavailable (26).

miR-222. i) Source. https://doi.org/10.1007/s13277-015-4161-0

ii) Materials examined. PubMed database and publisher abstract available; full methods and supplementary material not obtained.

iii) Appraisal. RNase, Proteinase K and membrane-disruption comparison (NV). Abstract-level uptake and miRNA-perturbation findings could not answer the topology question (27).

miR-221-3p. i) Source: https://doi.org/10.1089/cbr.2023.0123

ii) Materials examined. PubMed database and SAGE publisher abstract available; full article and associated supplementary material were not obtained.

iii) Appraisal. All three topology-control fields (NV) (31).

miR-155. i) Source. https://doi.org/10.1038/s41598-018-19339-5

ii) Materials examined. Europe PubMed Central (PMC) main article PMC5770414 and 41598_2018_19339_MOESM1_ESM.doc; Fig. S1 of the original study (28).

iii) Appraisal. RNase, Proteinase K and paired membrane-disruption protection (NR-MS). The supplement contains full-length EV-marker blots. The main-text Triton step included cell staining, not EV topology. Figs. 4C and 5C of the original study (28) also reported recipient-cell C/EBPβ, FOXO3a and TGF-β transcript changes following exosome co-culture; these expression observations do not establish intravesicular localization or a complete EV-specific causal mechanism (28).

miR-134. i) Source. https://doi.org/10.18632/oncotarget.5192

ii) Materials examined. Europe PMC main article PMC4741729 and oncotarget-06-32774-s001.pdf; all 11 pages.

iii) Appraisal. RNase A pretreatment of conditioned medium before precipitation was reported. Proteinase K and paired membrane-disruption protection (NR-MS). The supplementary material described cytogenetic and RNA assays; Fig. S8 of the original study (29) reported the non-significant EV/cisplatin apoptosis comparison. This was distinct from sensitization after direct transfection (29).

miR-34a-5p. i) Source. https://doi.org/10.1016/j.mcp.2024.101964

ii) Materials examined. PubMed database, publisher and Directory of Open Access Journals abstracts/metadata were available; full-text access was unsuccessful despite the open-access listing.

iii) Appraisal. All three topology-control fields (NV) (60).

miR-99b-3p. i) Source. https://doi.org/10.1016/j.intimp.2024.113168

ii) Materials examined. PubMed database and publisher abstract were available; full methods and supplementary material were not obtained.

iii) Appraisal. All three topology-control fields (NV). Macrophage/drug-response findings in the abstract do not establish intravesicular cargo localization (55).

Engineered miR-222 inhibitor. i) Source. https://doi.org/10.1111/cas.70118

ii) Materials examined. Europe PMC main article PMC12400054; CAS-116-2547-s002.docx (Data S1 of the original study); CAS-116-2547-s001.docx (supplementary tables and Figs. S1-6 of the original study) (66).

iii) Appraisal. RNase, Proteinase K and paired membrane-disruption protection (NR-MS). Loading/uptake microscopy was present. Data S1 of the original study (66), *in vivo* tumorigenicity assay, specifies adriamycin treatment in both EV groups. This comparison demonstrated reduced xenograft growth during adriamycin treatment but did not provide a full factorial test of synergy (66).

iv) Source availability. Supplementary materials for three studies (28,29,66) were obtained from the official Europe PMC 'supplementaryFiles' endpoints for PMC5770414, PMC4741729 and PMC12400054. The third-party reproduction for one study (26) was not authenticated against the publisher PDF. For NV entries, unavailable full methods prevented conclusions about whether the localization assays were performed.

Table SI. Record-level literature search and screening ledger.

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
42259464	10.1016/j.cellsig.2026.112660	pubmed.ncbi.nlm.nih.gov/42259464/	BMP9 promotes osteogenic differentiation of BMSCs via the lncRNA SNHG3/miR-619-5p axis in a breast cancer bone metastatic microenvironment	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
42027810	10.1016/j.bioactmat.2026.02.013	pubmed.ncbi.nlm.nih.gov/42027810/	Intelligent plant exosomes synergize miRNAs and cisplatin for spatiotemporally precise multimodal treatment for TNBC with high safety	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
42558869	10.37349/etat.2026.1002394	pubmed.ncbi.nlm.nih.gov/42558869/	Liquid biopsy in breast cancer: Current biomarker platforms and clinical applications	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
42540602	10.2147/BCTT.S615413	pubmed.ncbi.nlm.nih.gov/42540602/	Exosomal miR-21 derived from paclitaxel-resistant breast cancer cells promotes chemoresistance in breast cancer via p53/PI3K/AKT/mTOR signaling	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
42491207	10.34133/bmr.0393	pubmed.ncbi.nlm.nih.gov/42491207/	Photoactivated hypericum perforatum -derived exosome nanovesicles suppress breast cancer via miR-172f/CD24-Siglec-G/10-driven macrophage reprogramming	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
42097228	10.1016/j.jconrel.2026.114973	pubmed.ncbi.nlm.nih.gov/42097228/	*In vivo* genetic circuit drives systemic PARP1 siRNA assembly into small extracellular vesicles for BRCA2-deficient breast cancer therapy	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Tested EV delivery payload identified in the title is siRNA, not miRNA/anti-miRNA
42334747	10.1007/s11033-026-12181-3	pubmed.ncbi.nlm.nih.gov/42334747/	Functional dichotomy of exosomal microRNAs in TNBC: Implications for chemoresistance and integrated theranostics	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
42328452	10.7150/ijbs.130653	pubmed.ncbi.nlm.nih.gov/42328452/	Cancer-associated adipocytes confer CDK4/6 inhibitor resistance in ER^+ breast cancer through an IL-6/STAT3/SREBF2 axis coupled with cholesterol metabolism and cell cycle reprogramming	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
42290533	10.1002/jbt.70971	pubmed.ncbi.nlm.nih.gov/42290533/	Exosomes as biomimetic nanoplatforms for synergistic targeted chemotherapy and photothermal treatment of breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41933680	10.1016/j.cca.2026.120989	pubmed.ncbi.nlm.nih.gov/41933680/	Small extracellular vesicles as biomarkers and therapeutic targets in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
42220423	10.32604/or.2026.075346	pubmed.ncbi.nlm.nih.gov/42220423/	Long non-coding RNAs in HER2-positive breast cancer: From resistance mechanisms to translational potential	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
42169152	10.1186/s13058-026-02306-8	pubmed.ncbi.nlm.nih.gov/42169152/	Tamoxifen-pretreated MSC exosomes promote endocrine resistance in ER-positive breast cancer cells through the miR-137/Serpina3 axis: A mechanistic study	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
42194032	10.3390/biom16050682	pubmed.ncbi.nlm.nih.gov/42194032/	Exosomal microRNAs as drivers of desmoplasia and treatment resistance in breast cancer: Mechanisms, biomarker potential, and therapeutic opportunities	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
42030227	10.1021/acsnano.6c02310	pubmed.ncbi.nlm.nih.gov/42030227/	A bioinspired exosomal nanoplatform for coordinated sorafenib and microRNA delivery to sensitize ferroptosis and induce immunoactivation in triple-negative breast cancer	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
42100959	10.1080/14796694.2026.2665816	pubmed.ncbi.nlm.nih.gov/42100959/	Flavonol-mediated modulation of angiogenesis-related microRNAs in breast cancer: A narrative synthesis of current evidence and knowledge gaps	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41822558	10.3892/ol.2026.15504	pubmed.ncbi.nlm.nih.gov/41822558/	Orchestrating organotropism: miRNA-driven mechanisms of site-specific metastasis in triple-negative breast cancer (review)	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
42148153	10.3389/fmolb.2026.1800738	pubmed.ncbi.nlm.nih.gov/42148153/	RNA duplex formation and competing endogenous RNA, proposed as mechanisms in regulating expression of natural antisense transcripts- from hypotheses to potential therapeutic applications	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
42123574	10.3390/ijms27093996	pubmed.ncbi.nlm.nih.gov/42123574/	MicroRNA-directed biomarkers and breast cancer therapeutics-potential to advance personalized approaches in clinical trials	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41724457	10.1016/j.cca.2026.120915	pubmed.ncbi.nlm.nih.gov/41724457/	Umbilical cord mesenchymal stem cell exosomes in breast cancer: False hope or a real solution?	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
42005442	10.2147/CMAR.S581878	pubmed.ncbi.nlm.nih.gov/42005442/	Synergistic inhibition of angiogenesis and tumor progression by CD73 inhibitor and menstrual blood stem cell-derived exosomes via miR-422a upregulation in HER2-positive breast cancer	Journal article	Title and abstract	C	Outside focused primary candidate set	CD73 inhibitor/EV intervention with cellular miRNA changes; the abstract does not establish miRNA cargo delivery or a cytotoxic chemotherapy-response endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41936016	10.1007/s12672-026-04912-6	pubmed.ncbi.nlm.nih.gov/41936016/	Exosomal miR-4443 confers cisplatin resistance in breast cancer by inhibiting ferroptosis	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality
42042028	10.3390/cimb48040368	pubmed.ncbi.nlm.nih.gov/42042028/	Treatment of mesenchymal stem cell-derived extracellular vesicles with extract of cultured Lentinula edodes modulates breast cancer stem cells and microRNA reprogramming	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality
41890307	10.1016/j.cdnut.2026.107657	pubmed.ncbi.nlm.nih.gov/41890307/	Fungal exosome-like nanoparticles from Huaier (*Trametes robiniophila* Murr.) exhibit anti-breast cancer activity	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
41881881	10.1016/j.clbc.2026.02.017	pubmed.ncbi.nlm.nih.gov/41881881/	Multidimensional regulatory mechanisms of extracellular matrix stiffness in breast cancer and its prospects for clinical translation	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41807051	10.1080/17501911.2026.2642583	pubmed.ncbi.nlm.nih.gov/41807051/	Non-coding RNAs regulation in breast cancer pathogenesis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41614405	10.3892/ijo.2026.5851	pubmed.ncbi.nlm.nih.gov/41614405/	Advances in the study of the breast carcinoma exosomal microRNAs: From basic mechanisms to clinical applications (review)	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41939911	10.3389/fimmu.2026.1686658	pubmed.ncbi.nlm.nih.gov/41939911/	Pancreatic cancer immunotherapy biomarkers: From traditional markers to multimodal integration and dynamic monitoring	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41892339	10.3390/cells15060550	pubmed.ncbi.nlm.nih.gov/41892339/	SMR peptide modulates tumor-derived extracellular vesicles microRNA and inflammatory transcript signatures in TNBC	Journal article	Title and abstract	C	Outside focused primary candidate set	Peptide-induced EV miRNA/inflammatory profiling; no tested chemotherapy-response or miRNA-delivery therapeutic endpoint in the abstract
41510212	10.1016/j.omton.2025.201107	pubmed.ncbi.nlm.nih.gov/41510212/	Mesenchymal stem cell-derived extracellular vesicle therapy in breast cancer: A systematic review and meta-analysis of *in vitro* studies	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41789624	10.1021/acs.analchem.5c07308	pubmed.ncbi.nlm.nih.gov/41789624/	A novel dual signal amplification strategy integrating APE1-assisted DNA walker with rolling circle amplification for highly sensitive, label-free exosomal microRNA analysis	Journal article; research support, Non-U.S. Government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
41899505	10.3390/cancers18060900	pubmed.ncbi.nlm.nih.gov/41899505/	Circulating microRNA in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41317936	10.1016/j.cellsig.2025.112287	pubmed.ncbi.nlm.nih.gov/41317936/	MIR4435-2HG promotes breast cancer evolution through miR-205-5p/UBE2N axis and exosome-mediated macrophage M2-like polarization	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
41808825	10.3389/fimmu.2026.1792965	pubmed.ncbi.nlm.nih.gov/41808825/	MiRNAs: A call to arms that shapes the plasticity of tumor associated macrophages in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41752017	10.3390/ijms27041882	pubmed.ncbi.nlm.nih.gov/41752017/	Non-coding RNA-based therapeutic strategies in triple-negative breast cancer: A systematic review	Journal article; systematic review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41727088	10.64898/2026.02.11.705398	pubmed.ncbi.nlm.nih.gov/41727088/	Doxorubicin-induced cardiotoxicity is propagated by paracrine signaling through small extracellular vesicles	Journal article; preprint	Title and publication metadata	P	Outside focused primary candidate set	Indexed preprint; excluded from the peer-reviewed primary candidate set
41711594	10.1002/jev2.70242	pubmed.ncbi.nlm.nih.gov/41711594/	M1 macrophage-derived small extracellular vesicles as synergistic nanotherapeutics: Harnessing intrinsic anticancer activity and drug delivery capacity	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
41500295	10.1016/j.phrs.2026.108088	pubmed.ncbi.nlm.nih.gov/41500295/	Fig-derived exosome-like nanoparticles attenuating bone metastasis of breast cancer through establishing an antitumor microenvironment	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
41604098	10.1007/s12672-026-04469-4	pubmed.ncbi.nlm.nih.gov/41604098/	MicroRNA-mediated modulation of cancer-associated fibroblasts in HER2-positive breast tumor microenvironment: A comprehensive review	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41421413	10.1016/j.ejphar.2025.178501	pubmed.ncbi.nlm.nih.gov/41421413/	Therapeutic potential of microRNA let-7a-enriched exosomes in modulating macrophage plasticity (M1) and inhibiting malignant tendencies in breast cancer	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
41599765	10.3390/ph19010168	pubmed.ncbi.nlm.nih.gov/41599765/	Therapeutic potential of bovine colostrum- and milk-derived exosomes in cancer prevention and treatment: Mechanisms, evidence and future perspectives	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41526862	10.1186/s12885-025-15499-6	pubmed.ncbi.nlm.nih.gov/41526862/	Identification of novel exosomal miRNAs and their role in diagnosis and prognosis of triple negative breast cancer	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
41602389	10.3389/fonc.2025.1642521	pubmed.ncbi.nlm.nih.gov/41602389/	Liquid biopsy in triple-negative breast cancer: a promising tool for diagnosis, prognosis and treatment monitoring	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41389614	10.1016/j.bbrc.2025.153124	pubmed.ncbi.nlm.nih.gov/41389614/	Breast cancer-derived exosomal miR-92a-3p stimulates malignant progression by driving TLR4/NF-κB-mediated macrophage M2 polarization	Journal article; research support, non-U.S. Government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
41858526	10.2147/BCTT.S575936	pubmed.ncbi.nlm.nih.gov/41858526/	Emerging targeted and multimodal therapeutic strategies in breast cancer: A comprehensive review	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41483364	10.1007/s12672-025-04279-0	pubmed.ncbi.nlm.nih.gov/41483364/	Pro-tumorigenic effects and therapeutic implications of mesenchymal stem cell-derived exosomes under hypoxic conditions: A systematic review	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
42631721	10.1177/10732748261481227	pubmed.ncbi.nlm.nih.gov/42631721/	Exploring the clinical transformation of circRNA as a biomarker in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
42167849	10.1016/bs.acr.2025.12.009	pubmed.ncbi.nlm.nih.gov/42167849/	Biomarkers for targeted therapy and treatment decision making	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
42167847	10.1016/bs.acr.2026.01.012	pubmed.ncbi.nlm.nih.gov/42167847/	Future perspectives and challenges for identification and recognition of clinically significant cancer biomarkers	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41946306	10.1016/j.ctarc.2026.101198	pubmed.ncbi.nlm.nih.gov/41946306/	miR-155 and the orchestration of cell-death evasion and chemoresistance in cancer: Isoform-specific mechanisms and therapeutic opportunities	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41539176	10.1016/j.ctarc.2026.101100	pubmed.ncbi.nlm.nih.gov/41539176/	Non-coding RNAs in breast cancer bone metastasis: regulators and novel therapeutic targets	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41237467	10.1016/j.drup.2025.101324	pubmed.ncbi.nlm.nih.gov/41237467/	Y10 phosphorylation of LDHA promotes the release of extracellular vesicle-derived circSEPT9 to enhance the chemoresistance of triple negative breast cancer cells via modulation of the miR-515-5p/KIAA1429 axis	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41167582	10.1016/j.canlet.2025.218105	pubmed.ncbi.nlm.nih.gov/41167582/	Neutrophils exposed to a cholesterol metabolite secrete extracellular vesicles that promote epithelial-mesenchymal transition and stemness in breast cancer cells	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality
41595551	10.3390/biomedicines14010014	pubmed.ncbi.nlm.nih.gov/41595551/	Pentraxin 3 as a modulator of miRNAs and extracellular vesicles release in triple-negative breast cancer cells	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
41462674	10.3390/antiox14121474	pubmed.ncbi.nlm.nih.gov/41462674/	The redox-adhesion-exosome (RAX) hub in cancer: Lipid peroxidation-driven EMT plasticity and ferroptosis defense with HNE/MDA signaling and lipidomic perspectives	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41281644	10.1016/j.mtbio.2025.102492	pubmed.ncbi.nlm.nih.gov/41281644/	Targeted inhibition of MDSC-derived exosomal miR-155-5p restrains epithelial-mesenchymal transition in hormone receptor-positive breast cancer by regulating SIRT1	Journal article	Title and abstract	C	Outside focused primary candidate set	Anti-miRNA therapy uses polymeric micelles, not EV delivery; natural EV mechanism concerns EMT, not a tested cytotoxic drug-response endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41208846	10.14740/wjon2670	pubmed.ncbi.nlm.nih.gov/41208846/	miR-301a-3p promotes triple-negative breast cancer progression via PTEN suppression in tumor cells and the microenvironment	Journal article	Title and abstract	C	Outside focused primary candidate set	EV-miRNA biology, target regulation or profiling without the focused cytotoxic-response or EV-loaded miRNA therapeutic-delivery endpoint
37843782	10.1007/s13258-023-01454-x	pubmed.ncbi.nlm.nih.gov/37843782/	Mesenchymal stem cell-derived exosome miR-342-3p inhibits metastasis and chemo-resistance of breast cancer through regulating ID4	Published erratum	Title and publication metadata	N	Outside focused primary candidate set	Correction/retraction notice, not an independent original study; retained in retrieval ledger
41283333	10.3390/ncrna11060078	pubmed.ncbi.nlm.nih.gov/41283333/	miRNA and its implications in the treatment resistance in breast cancer-Narrative review of what do we know so far	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41254117	10.1038/s41598-025-24447-0	pubmed.ncbi.nlm.nih.gov/41254117/	Apigenin-loaded exosome-like vesicles suppress triple-negative breast cancer by modulating miR-155/SOCS1/VHL, miR-146a/IRAK1/TRAF6 and reactivating STING/BRCA1	Journal article	Title and abstract	C	Outside focused primary candidate set	EV delivery of apigenin with downstream cellular miRNA changes; not delivery of the miRNA cargo itself

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41301888	10.3390/biomedicines13112796	pubmed.ncbi.nlm.nih.gov/41301888/	Hypoxia-induced extracellular vesicles and non-coding RNAs in cancer: A systematic review of tumor dynamics and therapeutic implications in preclinical animal models	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40730068	10.1016/j.bios.2025.117763	pubmed.ncbi.nlm.nih.gov/40730068/	Extracellular vesicle miRNA detection based on membrane fusion and nucleic acid nanostructures	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
41186624	10.1007/s11033-025-11231-6	pubmed.ncbi.nlm.nih.gov/41186624/	Tumor microenvironment in breast cancer: Cellular crosstalk, pathways, and therapeutic insights	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41183156	10.1002/jbt.70542	pubmed.ncbi.nlm.nih.gov/41183156/	Exosomal miR-155-5p modulates breast cancer proliferation and metastasis via NF-κB activation	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
40818418	10.1016/j.cancergen.2025.08.003	pubmed.ncbi.nlm.nih.gov/40818418/	The impact of extracellular vesicles on breast cancer metastasis and therapeutics: Genetic considerations	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
41279026	10.1101/2025.10.21.683755	pubmed.ncbi.nlm.nih.gov/41279026/	M1 macrophage-derived small extracellular vesicles as synergistic nanotherapeutics: Harnessing intrinsic anticancer activity and drug delivery capacity	Journal article; preprint	Title and abstract	P	Outside focused primary candidate set	Preprint record; peer-reviewed version recorded separately, not counted as an independent primary publication
41088222	10.1186/s12935-025-03994-6	pubmed.ncbi.nlm.nih.gov/41088222/	Tumor-derived small extracellular vesicles loaded with functionally active miR-34a mimic can modify the anti-tumor response in 4T1 breast cancer animal model	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
40915108	10.1016/j.redox.2025.103843	pubmed.ncbi.nlm.nih.gov/40915108/	Small extracellular vesicles orchestrated pathological communications between breast cancer cells and cardiomyocytes as a novel mechanism exacerbating anthracycline cardiotoxicity by fueling ferroptosis	Journal article; research support, non-U.S. Government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41029829	10.1186/s13046-025-03529-x	pubmed.ncbi.nlm.nih.gov/41029829/	Cancer-associated fibroblast promotes tamoxifen resistance in estrogen receptor positive breast cancer via exosomal LncRNA PRKCQ-AS1/miR-200a-3p/MKP1 axis-mediated apoptosis suppression	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
41097280	10.3390/molecules30193858	pubmed.ncbi.nlm.nih.gov/41097280/	Exosomal MicroRNA: Diagnostic potential and role in breast cancer dissemination	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40614603	10.1016/j.intimp.2025.115160	pubmed.ncbi.nlm.nih.gov/40614603/	Exosomal miR-3529-3p increases the sensitivity of trastuzumab via Wnt/β-catenin signaling pathway by targeting HOOK3	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
41403733	10.34172/apb.025.43440	pubmed.ncbi.nlm.nih.gov/41403733/	Continuous uptake of miR-181a-2 mimetic induces constitutive overexpression of cellular miR-181a-2 in MCF-7 breast cancer cells: Links with progression of drug resistance	Journal article	Title and abstract	C	Outside focused primary candidate set	Endocrine/tamoxifen resistance and repeated cellular transfection; outside the focused cytotoxic chemotherapy/EV-miRNA question

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41059755	10.26355/eurrev_202509_37398	pubmed.ncbi.nlm.nih.gov/41059755/	Collective retraction notice (20 articles), including: Natural killer cell-derived exosome-entrapped paclitaxel can enhance its anti-tumor effect	Journal article; retraction notice	Title and publication metadata	N	Outside focused primary candidate set	Collective retraction notice covering 20 articles; the Title field gives one EV-related example. Retained only in the retrieval ledger, outside the candidate evidence set.
40744188	10.1016/j.ijbiomac.2025.146386	pubmed.ncbi.nlm.nih.gov/40744188/	The role of microRNAs in breast cancer: Diagnostic and therapeutic implications	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40602705	10.1016/j.cca.2025.120456	pubmed.ncbi.nlm.nih.gov/40602705/	Exosome biosensors for the detection of breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40501184	10.1111/cas.70118	pubmed.ncbi.nlm.nih.gov/40501184/	Engineered EVs-mediated miR-222 targeting PTEN/FN1 axis reverses anthracycline resistance in HER2-negative breast cancer	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality
40819077	10.1186/s10020-025-01336-w	pubmed.ncbi.nlm.nih.gov/40819077/	Targeting LINC02544/miR-497-5p/CAPRIN1 axis via exosome-based siRNA to overcome immunotherapy resistance in triple-negative breast cancer	Journal article; research support, non-U.S. Government	Title and publication metadata	C	Outside focused primary candidate set	Tested EV delivery payload identified in the title is siRNA, not miRNA/anti-miRNA

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
40389020	10.1016/j.canlet.2025.217794	pubmed.ncbi.nlm.nih.gov/40389020/	Preferential release of microRNAs via extracellular vesicles is associated with ductal carcinoma *in situ* to invasive breast cancer progression	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
40831937	10.3389/fonc.2025.1607960	pubmed.ncbi.nlm.nih.gov/40831937/	Liquid biopsy in TNBC: Significance in diagnostics, prediction, and treatment monitoring	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40711489	10.1007/s00018-025-05781-y	pubmed.ncbi.nlm.nih.gov/40711489/	Fibroblasts activated by miRs-185-5p, -652-5p, and -1246 shape the tumor microenvironment in triple-negative breast cancer via PATZ1 downregulation	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
40702555	10.1186/s12967-025-06794-8	pubmed.ncbi.nlm.nih.gov/40702555/	Hypoxic cancer-associated fibroblast exosomal circSTAT3 drives triple negative breast cancer stemness via miR-671-5p/Notch1 signaling	Journal article; research support, non-U.S. Government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
40691627	10.1186/s13046-025-03471-y	pubmed.ncbi.nlm.nih.gov/40691627/	Small extracellular vesicles: Messengers at the service of breast cancer agenda in the primary and distant microenvironments	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
40722763	10.3390/biomedicines13071691	pubmed.ncbi.nlm.nih.gov/40722763/	Targeting resistance pathways in breast cancer through precision oncology: Nanotechnology and immune modulation approaches	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40772722	10.1080/07357907.2025.2529878	pubmed.ncbi.nlm.nih.gov/40772722/	Immunomodulation of the breast cancer microenvironment by tumor-derived exosomes: Implications for immunotherapy	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40565366	10.3390/ijms26125906	pubmed.ncbi.nlm.nih.gov/40565366/	Comparison bioinformatic analysis of extracellular vesicles-related genes and MicroRNAs in breast cancer	Journal article; comparative study	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
40564894	10.3390/ijms26125430	pubmed.ncbi.nlm.nih.gov/40564894/	Unveiling the involvement of extracellular vesicles in breast cancer's organotrophic metastasis: Molecular mechanisms and translational prospects	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40530018	10.3389/fonc.2025.1592006	pubmed.ncbi.nlm.nih.gov/40530018/	Current trends in theranostic applications of extracellular vesicles in cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
40047645	10.1158/1541-7786.MCR-24-0494	pubmed.ncbi.nlm.nih.gov/40047645/	Insulin resistance increases TNBC aggressiveness and brain metastasis via adipocyte-derived exosomes	Journal article; research support, N.I.H., extramural	Title and abstract	C	Outside focused primary candidate set	Insulin resistance and metastatic progression, not cytotoxic drug resistance
40487183	10.1016/j.mtbio.2025.101857	pubmed.ncbi.nlm.nih.gov/40487183/	Efficient metabolic fingerprinting profiling of extracellular vesicles for precise cancer diagnosis and treatment monitoring	Journal article	Title and abstract	C	Outside focused primary candidate set	EV metabolomic biomarkers; miRNAs are background rather than the measured biomarker
40255897	10.1016/j.jlb.2025.100293	pubmed.ncbi.nlm.nih.gov/40255897/	The growing field of liquid biopsy and its Snowball effect on reshaping cancer management	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40360476	10.1038/s41392-025-02245-4	pubmed.ncbi.nlm.nih.gov/40360476/	Exosomal transfer of pro-pyroptotic miR-216a-5p exacerbates anthracycline cardiotoxicity through breast cancer-heart pathological crosstalk	Journal article; research support, non-U.S. Government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery
40203985	10.1016/j.yexcr.2025.114552	pubmed.ncbi.nlm.nih.gov/40203985/	Evaluation of the impact of miR-3143 on the PI3K/AKT signaling pathway and its subsequent influence on the metastatic phenotype of triple-negative breast cancer cells	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	HUCMSC-derived exosomes electroporated with miR-3143 are tested in TNBC cells; delivery intervention confirmed by abstract

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
40405948	10.21037/gs-2025-11	pubmed.ncbi.nlm.nih.gov/40405948/	Liquid biopsy in breast cancer: A practical guide for surgeons	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40172996	10.1096/fj.202402024RRR	pubmed.ncbi.nlm.nih.gov/40172996/	CAF-derived exosomal LINC01711 promotes breast cancer progression by activating the miR-4510/NELFE axis and enhancing glycolysis	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
40244378	10.3390/ijms26073449	pubmed.ncbi.nlm.nih.gov/40244378/	MicroRNAs as endocrine modulators of breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39947472	10.1016/j.jbc.2025.108304	pubmed.ncbi.nlm.nih.gov/39947472/	BANCR-containing extracellular vesicles enhance breast cancer resistance	Journal article; research support, non-U.S. Government	Title and abstract	C	Outside focused primary candidate set	EV lncRNA BANCR and trastuzumab resistance; different transported RNA and treatment context
39373750	10.1007/s00210-024-03488-8	pubmed.ncbi.nlm.nih.gov/39373750/	Cancer-associated fibroblast-secreted exosomal miR-454-3p inhibits lipid metabolism and ferroptosis in breast cancer by targeting ACSL4	Journal article; research support, non-U.S. Government	Title and abstract	C	Outside focused primary candidate set	EV-miRNA ferroptosis mechanism without a specified cytotoxic chemotherapy-response or engineered delivery endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
40151143	10.3724/abbs.2025017	pubmed.ncbi.nlm.nih.gov/40151143/	Breast cancer-derived exosomal miR-105-5p facilitates the transformation of NFs into CAFs through LATS2-NF-κB signaling	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
40100465	10.1007/s12032-025-02647-y	pubmed.ncbi.nlm.nih.gov/40100465/	Exosomes derived from natural killer cells: Transforming immunotherapy for aggressive breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
40206797	10.20517/evcna.2024.90	pubmed.ncbi.nlm.nih.gov/40206797/	Extracellular vesicle-mediated chemoresistance in breast cancer: Focus on miRNA cargo	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39972244	10.1186/s11658-025-00701-1	pubmed.ncbi.nlm.nih.gov/39972244/	Human urine stem cells protect against cyclophosphamide-induced premature ovarian failure by inhibiting SLC1A4-mediated outflux of intracellular serine in ovarian granulosa cells	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery
40206796	10.20517/evcna.2024.85	pubmed.ncbi.nlm.nih.gov/40206796/	Extracellular vesicles and miRNA-based therapies in triple-negative breast cancer: Advances and clinical perspectives	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
39991583	10.7150/jca.100619	pubmed.ncbi.nlm.nih.gov/39991583/	LINC00899 suppresses the progression of triple-negative breast cancer via the miRNA-425/PTEN axis and is a biomarker for neoadjuvant chemotherapy efficacy	Journal article	Title and abstract	C	Outside focused primary candidate set	lncRNA/circRNA is the transported or measured EV-associated RNA; downstream miRNA regulation is not direct EV-miRNA transfer
39891771	10.1007/s10142-025-01531-2	pubmed.ncbi.nlm.nih.gov/39891771/	The role of exosomal non-coding RNAs in the breast cancer tumor microenvironment	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39740727	10.1016/j.yexcr.2024.114401	pubmed.ncbi.nlm.nih.gov/39740727/	Exploring the role of exosomal lncRNA in cancer immunopathogenesis: Unraveling the immune response and EMT pathways	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39710273	10.1016/j.bcp.2024.116719	pubmed.ncbi.nlm.nih.gov/39710273/	CircDUSP16 mediates the effect of triple-negative breast cancer in pirarubicin via the miR-1224-3p/TFDP2 axis	Journal article	Title and abstract	C	Outside focused primary candidate set	lncRNA/circRNA is the transported or measured EV-associated RNA; downstream miRNA regulation is not direct EV-miRNA transfer
39940718	10.3390/ijms26030945	pubmed.ncbi.nlm.nih.gov/39940718/	Small extracellular vesicles from breast cancer cells induce cardiotoxicity	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
41078903	10.5114/aoms/187080	pubmed.ncbi.nlm.nih.gov/41078903/	Exosomal miR-182-5p from breast cancer cells reprogram tumor-associated macrophages and promote triple-negative breast cancer progression by targeting Notch1 in macrophages	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
40457968	10.2174/0115680096388071250527074008	pubmed.ncbi.nlm.nih.gov/40457968/	Extracellular vesicles-associated tRFs as emerging biomarkers in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39608481	10.1016/j.yexcr.2024.114359	pubmed.ncbi.nlm.nih.gov/39608481/	Exosomal non-coding RNA (ncRNA) in breast cancer pathogenesis and therapy; two sides of the same coin	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39484777	10.2174/0109298673341499241016110341	pubmed.ncbi.nlm.nih.gov/39484777/	Exosomal delivery of miR-155 inhibitor can suppress migration, invasion, and angiogenesis via PTEN and DUSP14 in triple-negative breast cancer	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
39054208	10.1016/j.clbc.2024.06.016	pubmed.ncbi.nlm.nih.gov/39054208/	The predictive value of blood-derived exosomal miRNAs as biomarkers in breast cancer: A systematic review	Systematic review; journal article	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
38512533	10.1007/s12282-024-01562-w	pubmed.ncbi.nlm.nih.gov/38512533/	Liquid biopsy using non-coding RNAs and extracellular vesicles for breast cancer management	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39707465	10.1186/s12967-024-05963-5	pubmed.ncbi.nlm.nih.gov/39707465/	Unraveling the interplay of $CD8^+$ T cells and microRNA signaling in cancer: Implications for immune dysfunction and therapeutic approaches	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39298813	10.1016/j.intimp.2024.113168	pubmed.ncbi.nlm.nih.gov/39298813/	Drug-resistant exosome miR-99b-3p induces macrophage polarization and confers chemoresistance on sensitive cells by targeting PPP2CA	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality
39469816	10.1111/1759-7714.15479	pubmed.ncbi.nlm.nih.gov/39469816/	Exosome-transported circ_0001955 as a potent driver of breast cancer by regulating the miR-708-5p/PGK1 axis	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
38963787	10.1089/cbr.2024.0009	pubmed.ncbi.nlm.nih.gov/38963787/	hsa_circ_002144 promotes glycolysis and immune escape of breast cancer through miR-326/PKM Axis	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
39574053	10.1186/s12885-024-13173-x	pubmed.ncbi.nlm.nih.gov/39574053/	A machine learning model revealed that exosome small RNAs may participate in the development of breast cancer through the chemokine signaling pathway	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
39558342	10.1186/s12964-024-01936-9	pubmed.ncbi.nlm.nih.gov/39558342/	miR-23b-3p, miR-126-3p and GAS5 delivered by extracellular vesicles inhibit breast cancer xenografts in zebrafish	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
39454476	10.1016/j.prp.2024.155651	pubmed.ncbi.nlm.nih.gov/39454476/	*In silico* analysis and comprehensive review of circular-RNA regulatory roles in breast diseases; a step-toward non-coding RNA precision	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39414799	10.1038/s41419-024-07133-3	pubmed.ncbi.nlm.nih.gov/39414799/	Loss of miR-200c-3p promotes resistance to radiation therapy via the DNA repair pathway in prostate cancer	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery
39474419	10.3389/fimmu.2024.1468229	pubmed.ncbi.nlm.nih.gov/39474419/	Extracellular vesicles from human breast cancer-resistant cells promote acquired drug resistance and pro-inflammatory macrophage response	Journal article	Title and abstract	C	Outside focused primary candidate set	Drug-resistant EV transcriptomic effects; specific miRNA cargo attribution is not the primary measured mechanism

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
39346711	10.1007/s12291-023-01174-9	pubmed.ncbi.nlm.nih.gov/39346711/	Circulating miRNA-373 and vascular endothelial growth factor as potential biomarkers for early detection of breast cancer	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
39298294	10.1021/acs.analchem.4c03129	pubmed.ncbi.nlm.nih.gov/39298294/	*In situ*, fusion-free, multiplexed detection of small extracellular vesicle miRNAs for cancer diagnostics	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
39260692	10.1016/j.jbc.2024.107753	pubmed.ncbi.nlm.nih.gov/39260692/	Cortisol affects macrophage polarization by inducing miR-143/145 cluster to reprogram glucose metabolism and by promoting TCA cycle anaplerosis	Journal article; research support, n.i.h., extramural	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
39335655	10.3390/biomedicines12092142	pubmed.ncbi.nlm.nih.gov/39335655/	Exosome-like nanoparticles, high in trans-δ-viniferin derivatives, produced from grape cell cultures: Preparation, characterization, and anticancer properties	Journal article	Title and abstract	C	Outside focused primary candidate set	Grape nanovesicle/stilbenoid therapy; miRNA presence alone does not establish a miRNA-specific intervention

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
39310782	10.2147/BCTT.S478328	pubmed.ncbi.nlm.nih.gov/39310782/	Plasma exosome miR-203a-3p is a potential liquid biopsy marker for assessing tumor progression in breast cancer patients	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
39289425	10.1038/s41598-024-72226-0	pubmed.ncbi.nlm.nih.gov/39289425/	Exosomal fragment enclosed polyamine-salt nano-complex for co-delivery of docetaxel and mir-34a exhibits higher cytotoxicity and apoptosis in breast cancer cells	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
39248519	10.1021/acsnano.4c08339	pubmed.ncbi.nlm.nih.gov/39248519/	All-in-one fusogenic nanoreactor for the rapid detection of exosomal MicroRNAs for breast cancer diagnosis	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
39213248	10.1097/MD.0000000000038549	pubmed.ncbi.nlm.nih.gov/39213248/	Correlative expression of exosomal miRNAs in chemotherapy resistance of triple-negative breast cancer: An observational study	Journal article; observational study	Title and abstract	B	Relevant candidate; full-text appraisal separate	Original EV-miRNA investigation of chemotherapy response in patient samples; diagnostic performance is not assumed to be independently validated

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
39198393	10.1038/s41419-024-07020-x	pubmed.ncbi.nlm.nih.gov/39198393/	LncRNA HAGLROS promotes breast cancer evolution through miR-135b-3p/COL10A1 axis and exosome-mediated macrophage M2 polarization	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
39199587	10.3390/cancers16162814	pubmed.ncbi.nlm.nih.gov/39199587/	Role of microRNA-204 in regulating the hallmarks of breast cancer: An update	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39175471	10.3389/fonc.2024.1436942	pubmed.ncbi.nlm.nih.gov/39175471/	Crosstalk between breast cancer-derived microRNAs and brain microenvironmental cells in breast cancer brain metastasis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39131340	10.1101/2024.08.02.606061	pubmed.ncbi.nlm.nih.gov/39131340/	Neutrophils exposed to a cholesterol metabolite secrete extracellular vesicles that promote epithelial-mesenchymal transition and stemness in breast cancer cells	Journal article; preprint	Title and abstract	P	Outside focused primary candidate set	Preprint record; peer-reviewed version recorded separately, not counted as an independent primary publication
38940326	10.3892/or.2024.8766	pubmed.ncbi.nlm.nih.gov/38940326/	Interplay between Wnt signaling molecules and exosomal miRNAs in breast cancer (Review)	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
38810840	10.1016/j.mcp.2024.101964	pubmed.ncbi.nlm.nih.gov/38810840/	Exosomes regulate doxorubicin resistance in breast cancer via miR-34a-5p/Notch1	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality
38529940	10.1089/cbr.2023.0123	pubmed.ncbi.nlm.nih.gov/38529940/	Exosome-derived microRNA-221-3p desensitizes breast cancer cells to adriamycin by regulating PIK3r1 -mediated glycose metabolism	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality
39113702	10.7150/ijbs.89822	pubmed.ncbi.nlm.nih.gov/39113702/	PKCα induced the generation of extracellular vesicles in activated platelets to promote breast cancer metastasis	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
38993979	10.7717/peerj.17662	pubmed.ncbi.nlm.nih.gov/38993979/	Mechanism of action of miR-15a-5p and miR-152-3p in paraquat-induced pulmonary fibrosis through Wnt/β-catenin signaling mediation	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
39000239	10.3390/ijms25137133	pubmed.ncbi.nlm.nih.gov/39000239/	Mesenchymal stem cell-secreted exosomes and soluble signals regulate breast cancer metastatic dormancy: Current progress and future outlook	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
39062471	10.3390/biom14070757	pubmed.ncbi.nlm.nih.gov/39062471/	Extracellular vesicle-mediated modulation of stem-like phenotype in breast cancer cells under fluid shear stress	Journal article; research support, non-U.S. government; research support, U.S. government, non-P.H.S.	Title and abstract	C	Outside focused primary candidate set	EV-miRNA effects on stemness, macrophages or resistant-cell growth; abstract does not report restored cytotoxic drug sensitivity or a distinct engineered miRNA-delivery intervention
38849860	10.1186/s12943-024-02037-4	pubmed.ncbi.nlm.nih.gov/38849860/	Exosomal circSIPA1L3-mediated intercellular communication contributes to glucose metabolic reprogramming and progression of triple negative breast cancer	Journal article	Title and abstract	C	Outside focused primary candidate set	lncRNA/circRNA is the transported or measured EV-associated RNA; downstream miRNA regulation is not direct EV-miRNA transfer
38480836	10.1038/s41565-024-01624-2	pubmed.ncbi.nlm.nih.gov/38480836/	Universal STING mimic boosts antitumor immunity via preferential activation of tumor control signaling pathways	Journal article	Title and abstract	C	Outside focused primary candidate set	EV-miRNA biology, target regulation or profiling without the focused cytotoxic-response or EV-loaded miRNA therapeutic-delivery endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
38472732	10.1007/s13770-024-00629-1	pubmed.ncbi.nlm.nih.gov/38472732/	Exosomes derived from mouse breast carcinoma cells facilitate diabetic wound healing	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery
38582395	10.1016/j.canlet.2024.216842	pubmed.ncbi.nlm.nih.gov/38582395/	SOD1-high fibroblasts derived exosomal miR-3960 promotes cisplatin resistance in triple-negative breast cancer by suppressing BRSK2-mediated phosphorylation of PIMREG	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality
38780753	10.1007/s12672-024-01007-y	pubmed.ncbi.nlm.nih.gov/38780753/	Extracellular vesicle-mediated drug delivery in breast cancer theranostics	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
38746141	10.1101/2024.05.01.592097	pubmed.ncbi.nlm.nih.gov/38746141/	Insulin resistance increases TNBC aggressiveness and brain metastasis via adipocyte-derived exosomes	Preprint; journal article	Title and publication metadata	P	Outside focused primary candidate set	Indexed preprint; excluded from the peer-reviewed primary candidate set
38691224	10.1007/s12672-024-00993-3	pubmed.ncbi.nlm.nih.gov/38691224/	Drug resistance in breast cancer is based on the mechanism of exocrine non-coding RNA	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
38470169	10.1530/ERC-23-0257	pubmed.ncbi.nlm.nih.gov/38470169/	RAB5A in triple-negative breast cancer: A critical role in macrophage reshaping in an exosomal miR-21-dependent manner	Journal article	Title and abstract	C	Outside focused primary candidate set	EV-miRNA effects on stemness, macrophages or resistant-cell growth; abstract does not report restored cytotoxic drug sensitivity or a distinct engineered miRNA-delivery intervention
38365112	10.1016/j.cellsig.2024.111101	pubmed.ncbi.nlm.nih.gov/38365112/	Exosomal miR-122-3p represses the growth and metastasis of MCF-7/ADR cells by targeting GRK4-mediated activation of the Wnt/β-catenin pathway	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	EV-miRNA effects on stemness, macrophages or resistant-cell growth; abstract does not report restored cytotoxic drug sensitivity or a distinct engineered miRNA-delivery intervention
38270757	10.1007/s12033-023-01034-0	pubmed.ncbi.nlm.nih.gov/38270757/	Tumor Cell-derived exosomal miR-191-5p activates M2-subtype macrophages through SOCS3 to facilitate breast cancer	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
38403110	10.1016/j.canlet.2024.216747	pubmed.ncbi.nlm.nih.gov/3840311	$CD63^{+}$ cancer-associated fibroblasts confer CDK4/6 inhibitor resistance to breast cancer cells by exosomal miR-20	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
38645356	10.1021/acsomega.3c10086	pubmed.ncbi.nlm.nih.gov/38645356/	BRCA mutations and microRNA expression patterns in the peripheral blood of breast cancer patients	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
38426156	10.3892/ol.2024.14291	pubmed.ncbi.nlm.nih.gov/38426156/	Exploring miRNA-target gene profiles associated with drug resistance in patients with breast cancer receiving neoadjuvant chemotherapy	Journal article	Title and abstract	B	Relevant candidate; full-text appraisal separate	Original EV-miRNA investigation of chemotherapy response in patient samples; diagnostic performance is not assumed to be independently validated
38534323	10.3390/cells13060479	pubmed.ncbi.nlm.nih.gov/38534323/	Effects of Eribulin on the RNA content of extracellular vesicles released by metastatic breast cancer cells	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality
38472166	10.1111/cbdd.14488	pubmed.ncbi.nlm.nih.gov/38472166/	Serum exosomal miR-3662 down-regulates the expression of RBMS3 to promote malignant progression and gemcitabine resistance of breast cancer cells	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or miRNA cargo changes with cytotoxic treatment or drug response; abstract relevance does not establish complete EV causality

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
38416840	10.1126/sciadv.adh8689	pubmed.ncbi.nlm.nih.gov/38416840/	Colocalization of protein and microRNA markers reveals unique extracellular vesicle subpopulations for early cancer detection	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
38295998	10.1016/j.jconrel.2024.01.060	pubmed.ncbi.nlm.nih.gov/38295998/	*Brucea javanica*-derived exosome-like nanovesicles deliver miRNAs for cancer therapy	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
38280941	10.1038/s41388-024-02950-4	pubmed.ncbi.nlm.nih.gov/38280941/	Novel exosomal circEGFR facilitates triple negative breast cancer autophagy via promoting TFEB nuclear trafficking and modulating miR-224-5p/ATG13/ULK1 feedback loop	Journal article; research support, N.I.H., extramural	Title and abstract	C	Outside focused primary candidate set	lncRNA/circRNA is the transported or measured EV-associated RNA; downstream miRNA regulation is not direct EV-miRNA transfer
38455764	10.3389/fmolb.2024.1330144	pubmed.ncbi.nlm.nih.gov/38455764/	Exosomal microRNAs in breast cancer: Towards theranostic applications	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
38278522	10.1021/acsnano.3c09491	pubmed.ncbi.nlm.nih.gov/38278522/	Synergistic Viro-chemoimmunotherapy in breast cancer enabled by bioengineered immunostimulatory exosomes and dual-targeted coxsackievirus B3	Journal article	Title and abstract	C	Outside focused primary candidate set	EV-encapsulated oncolytic virus; miRNA regulatory sequences in the virus are distinct from therapeutic EV-miRNA cargo
38129137	10.1111/cas.16036	pubmed.ncbi.nlm.nih.gov/38129137/	Cancer cell-derived exosomal miR-20a-5p inhibits $CD8^+$ T-cell function and confers anti-programmed cell death 1 therapy resistance in triple-negative breast cancer	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
38197195	10.1096/fj.202300203R	pubmed.ncbi.nlm.nih.gov/38197195/	Extracellular vesicles released by hypoxia-induced tumor-associated fibroblasts impart chemoresistance to breast cancer cells via long non-coding RNA H19 delivery	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	lncRNA/circRNA is the transported or measured EV-associated RNA; downstream miRNA regulation is not direct EV-miRNA transfer
38283199	10.2147/IJN.S440619	pubmed.ncbi.nlm.nih.gov/38283199/	Engineered exosomes carrying miR-588 for treatment of triple negative breast cancer through remodeling the immunosuppressive microenvironment	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
38279296	10.3390/ijms25021295	pubmed.ncbi.nlm.nih.gov/38279296/	Exosomal microRNA-92b is a diagnostic biomarker in breast cancer and targets survival-related MTSS1L to promote tumorigenesis	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
38163254	10.1021/acsami.3c12680	pubmed.ncbi.nlm.nih.gov/38163254/	Inorganic nanoparticles change cancer-cell-derived extracellular vesicle secretion levels and cargo composition, resulting in secondary biological effects	Journal article	Title and abstract	C	Outside focused primary candidate set	Nanoparticle-induced EV secretion/cargo effects and toxicity; outside focused cytotoxic-response or miRNA-delivery intervention
38424419	10.2174/0118717530328985924021 4103350	pubmed.ncbi.nlm.nih.gov/38424419/	Inhibition of MiR-155 using exosomal delivery of antagomir can up-regulate PTEN in triple negative breast cancer	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
38070862	10.1016/j.lfs.2023.122332	pubmed.ncbi.nlm.nih.gov/38070862/	Extracellular vesicles-associated miRNAs in triple-negative breast cancer: From tumor biology to clinical relevance	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
36941811	10.2174/1566524023666230320120419	pubmed.ncbi.nlm.nih.gov/36941811/	Applications of exosome vesicles in different cancer types as biomarkers	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
38111465	10.3389/fmolb.2023.1302016	pubmed.ncbi.nlm.nih.gov/38111465/	Mapping knowledge structure and themes trends of cancer-associated fibroblasts: A text-mining study	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
38020052	10.2147/BCTT.S432750	pubmed.ncbi.nlm.nih.gov/38020052/	The Emerging roles of exosomal miRNAs in breast cancer progression and potential clinical applications	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37968694	10.1186/s40001-023-01463-2	pubmed.ncbi.nlm.nih.gov/37968694/	Mesenchymal stem cell-derived exosomes enriched with miR-218 reduce the epithelial-mesenchymal transition and angiogenesis in triple-negative breast cancer cells	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV/vesicle-based miRNA or anti-miRNA therapeutic intervention in a breast cancer model; preclinical, not clinical validation
37957722	10.1186/s12951-023-02190-w	pubmed.ncbi.nlm.nih.gov/37957722/	Intervening in hnRNPA2B1-mediated exosomal transfer of tumor-suppressive miR-184-3p for tumor microenvironment regulation and cancer therapy	Journal article	Title and abstract	C	Outside focused primary candidate set	Natural EV-miRNA effects on macrophages or immune evasion without a tested cytotoxic-response or engineered miRNA-delivery endpoint
37949846	10.1038/s41419-023-06254-5	pubmed.ncbi.nlm.nih.gov/37949846/	Exosome-transmitted miR-567 reverses trastuzumab resistance by inhibiting ATG5 in breast cancer	Retraction notice	Title and publication metadata	N	Outside focused primary candidate set	Correction/retraction notice, not an independent original study; retained in retrieval ledger

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
37932806	10.1186/s13578-023-01151-y	pubmed.ncbi.nlm.nih.gov/37932806/	miR-181a targets STING to drive PARP inhibitor resistance in BRCA- mutated triple-negative breast cancer and ovarian cancer	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	EV-miRNA study includes PARP-inhibitor resistance and reported platinum cross-resistance; mixed treatment context, not exclusively cytotoxic chemotherapy
37839359	10.1016/j.prp.2023.154845	pubmed.ncbi.nlm.nih.gov/37839359/	Potential roles of the exosome/microRNA axis in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37646133	10.1039/d3bm00573a	pubmed.ncbi.nlm.nih.gov/37646133/	ICAM-1-decorated extracellular vesicles loaded with miR-146a and Glut1 drive immunomodulation and hinder tumor progression in a murine model of breast cancer	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV or membrane-vesicle delivery of miRNA/anti-miRNA is evaluated in a breast cancer model; relevance does not imply clinical validation
37835573	10.3390/cancers15194879	pubmed.ncbi.nlm.nih.gov/37835573/	Extracellular vesicles in triple-negative breast cancer: Immune regulation, biomarkers and immunotherapeutic potential	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37769396	10.1016/j.prp.2023.154825	pubmed.ncbi.nlm.nih.gov/37769396/	Revolutionizing treatment for triple-negative breast cancer: Harnessing the power of exosomal miRNAs for targeted therapy	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
36621840	10.14670/HH-18-577	pubmed.ncbi.nlm.nih.gov/36621840/	Doxorubicin resistance in breast cancer xenografts and cell lines can be counterweighted by microRNA-140-3p, through PD-L1 suppression	Journal article	Title and abstract	C	Outside focused primary candidate set	Transported EV cargo is PD-L1 protein regulated by cellular miRNA; not direct EV-miRNA transfer
37736901	10.3390/ncrna9050055	pubmed.ncbi.nlm.nih.gov/37736901/	Novel insights into circular RNAs in metastasis in breast cancer: An update	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37352015	10.1080/1354750X.2023.2229537	pubmed.ncbi.nlm.nih.gov/37352015/	Exosomal miRNAs and breast cancer: A complex theranostics interlink with clinical significance	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37691919	10.3389/fimmu.2023.1255820	pubmed.ncbi.nlm.nih.gov/37691919/	Facts and prospects of peptide in targeted therapy and immune regulation against triple-negative breast cancer	Journal article; review; research support, non-U.S. government	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37410095	10.1002/2211-5463.13664	pubmed.ncbi.nlm.nih.gov/37410095/	Silencing of cystatin SN abrogates cancer progression and stem cell properties in papillary thyroid carcinoma	Retraction notice	Title and publication metadata	N	Outside focused primary candidate set	Correction/retraction notice, not an independent original study; retained in retrieval ledger

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
37385973	10.1111/1759-7714.15025	pubmed.ncbi.nlm.nih.gov/37385973/	Knockdown of circADAM9 inhibits cell progression and glycolysis by targeting the miR-1236-3p/FGF7 axis in breast cancer	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
37302631	10.1016/j.ijbiomac.2023.125295	pubmed.ncbi.nlm.nih.gov/37302631/	CircEGFR reduces the sensitivity of pirarubicin and regulates the malignant progression of triple-negative breast cancer via the miR-1299/EGFR axis	Journal article	Title and abstract	C	Outside focused primary candidate set	EV circRNA/lncRNA cargo is the primary transferred or measured species; downstream miRNA regulation is a different mechanism
37495592	10.1038/s41419-023-05986-8	pubmed.ncbi.nlm.nih.gov/37495592/	Cancer-associated fibroblasts facilitate breast cancer progression through exosomal circTBPL1-mediated intercellular communication	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
37461019	10.1186/s13058-023-01672-x	pubmed.ncbi.nlm.nih.gov/37461019/	Chemotherapy-induced exosomal circBACH1 promotes breast cancer resistance and stemness via miR-217/G3BP2 signaling pathway	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	EV circRNA/lncRNA cargo is the primary transferred or measured species; downstream miRNA regulation is a different mechanism
37452413	10.1186/s12935-023-02980-0	pubmed.ncbi.nlm.nih.gov/37452413/	Tumor-derived small extracellular vesicles promote breast cancer progression by upregulating PD-L1 expression in macrophages	Journal article	Title and abstract	C	Outside focused primary candidate set	Natural EV-miRNA effects on macrophages or immune evasion without a tested cytotoxic-response or engineered miRNA-delivery endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
37399419	10.1073/pnas.2303822120	pubmed.ncbi.nlm.nih.gov/37399419/	A DNA-based hydrogel for exosome separation and biomedical applications	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	EV-isolation technology and diagnostic applications; no focused breast cancer chemotherapy-response or miRNA therapeutic-delivery endpoint
37198028	10.1016/j.clbc.2023.04.007	pubmed.ncbi.nlm.nih.gov/37198028/	m^6A modification mediates exosomal LINC00657 to trigger breast cancer progression via inducing macrophage M2 polarization	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
37142558	10.1002/adbi.202300078	pubmed.ncbi.nlm.nih.gov/37142558/	Revisiting the role of CD63 as pro-tumorigenic or anti-tumorigenic tetraspanin in cancers and its theragnostic implications	Journal article; review; research support, non-U.S. government	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37001803	10.1016/j.lfs.2023.121621	pubmed.ncbi.nlm.nih.gov/37001803/	Human umbilical cord blood-mesenchymal stem cell derived exosomes as an efficient nanocarrier for docetaxel and miR-125a: Formulation optimization and anti-metastatic behavior	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV or membrane-vesicle delivery of miRNA/anti-miRNA is evaluated in a breast cancer model; relevance does not imply clinical validation
37274058	10.2147/BCTT.S400974	pubmed.ncbi.nlm.nih.gov/37274058/	Rab1A-mediated exosomal sorting of miR-200c enhances breast cancer lung metastasis	Journal article; retracted publication	Title and publication metadata	RET	Outside focused primary candidate set	Indexed as a retracted publication; excluded from the candidate evidence set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
37243750	10.1007/s10142-023-01083-3	pubmed.ncbi.nlm.nih.gov/37243750/	Therapeutic and diagnostic applications of exosomal circRNAs in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37237523	10.3390/biology12050710	pubmed.ncbi.nlm.nih.gov/37237523/	Dynamic role of exosome microRNAs in cancer cell signaling and their emerging role as non-invasive biomarkers	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37229186	10.3389/fgene.2023.1192866	pubmed.ncbi.nlm.nih.gov/37229186/	Editorial: exosomes, miRNAs, and lncRNAs in breast cancer: Therapeutic and diagnostic applications	Editorial	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37322628	10.4103/cjop.CJOP-D-22-00138	pubmed.ncbi.nlm.nih.gov/37322628/	Breast cancer nipple discharge exosomal microRNAs are stable under degradative conditions	Journal article	Title and abstract	C	Outside focused primary candidate set	Nipple-discharge miRNA stability and analytical methods; useful topology context, outside focused primary treatment-response/delivery criteria
36801666	10.1016/j.tranon.2023.101639	pubmed.ncbi.nlm.nih.gov/36801666/	Breast cancer stem cell-derived extracellular vesicles transfer ARRDC1-AS1 to promote breast carcinogenesis via a miR-4731-5p/AKT1 axis-dependent mechanism	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
37153758	10.3389/fphar.2023.1152672	pubmed.ncbi.nlm.nih.gov/37153758/	The landscape of exosomal non-coding RNAs in breast cancer drug resistance, focusing on underlying molecular mechanisms	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37131582	10.1101/2023.04.17.536958	pubmed.ncbi.nlm.nih.gov/37131582/	Colocalization of protein and microRNA markers reveals unique extracellular vesicle sub-populations for early cancer detection	Preprint; journal article	Title and publication metadata	P	Outside focused primary candidate set	Indexed preprint; excluded from the peer-reviewed primary candidate set
36717039	10.1016/j.gene.2023.147230	pubmed.ncbi.nlm.nih.gov/36717039/	Exosomal lncRNA NEAT1 induces paclitaxel resistance in breast cancer cells and promotes cell migration by targeting miR-133b	Journal article	Title and abstract	C	Outside focused primary candidate set	EV circRNA/lncRNA cargo is the primary transferred or measured species; downstream miRNA regulation is a different mechanism
36961985	10.1021/acsami.2c22749	pubmed.ncbi.nlm.nih.gov/36961985/	Engineered cancer-derived small extracellular vesicle-liposome hybrid delivery system for targeted treatment of breast cancer	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV or membrane-vesicle delivery of miRNA/anti-miRNA is evaluated in a breast cancer model; relevance does not imply clinical validation
37046799	10.3390/cancers15072138	pubmed.ncbi.nlm.nih.gov/37046799/	miR-146a-5p promotes angiogenesis and confers trastuzumab resistance in $HER2^{+}$ breast cancer	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
37034479	10.1177/17588359231165976	pubmed.ncbi.nlm.nih.gov/37034479/	Molecular landscape and emerging therapeutic strategies in breast cancer brain metastasis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
37004031	10.1186/s12967-023-04075-w	pubmed.ncbi.nlm.nih.gov/37004031/	Analysis of circulating extracellular vesicle derived microRNAs in breast cancer patients with obesity: A potential role for Let-7a	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
37035739	10.3389/fgene.2023.1134779	pubmed.ncbi.nlm.nih.gov/37035739/	Exosomal miRNAs as novel avenues for breast cancer treatment	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
36979159	10.3390/biology12030467	pubmed.ncbi.nlm.nih.gov/36979159/	Therapeutic delivery of tumor suppressor miRNAs for breast cancer treatment	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
36980680	10.3390/cancers15061794	pubmed.ncbi.nlm.nih.gov/36980680/	Revisiting the Syndecans: Master signaling regulators with prognostic and targetable therapeutic values in breast carcinoma	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
36816749	10.1016/j.omto.2023.01.001	pubmed.ncbi.nlm.nih.gov/36816749/	Breast cancer tumor microenvironment affects Treg/IL-17-producing Treg/Th17 cell axis: Molecular and therapeutic perspectives	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
36844629	10.3892/ol.2023.13705	pubmed.ncbi.nlm.nih.gov/36844629/	Taxol-resistant breast cancer cell-derived exosome-delivered miR-187-5p regulates the growth of breast cancer cells via ABCD2 and Wnt/β-catenin signaling	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-associated miRNA study includes cytotoxic treatment/drug response; abstract relevance alone does not establish causal or clinical validation
36310371	10.1111/cbdd.14167	pubmed.ncbi.nlm.nih.gov/36310371/	Identification of miR-3182 and miR-3143 target genes involved in the cell cycle as a novel approach in TNBC treatment: A systems biology approach	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV or membrane-vesicle delivery of miRNA/anti-miRNA is evaluated in a breast cancer model; relevance does not imply clinical validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
36992332	10.3390/v15030623	pubmed.ncbi.nlm.nih.gov/36992332/	Alterations in abundance and compartmentalization of miRNAs in blood plasma extracellular vesicles and extracellular condensates during HIV/SIV infection and its modulation by antiretroviral therapy (ART) and Δ-9-tetrahydrocannabinol (Δ9-THC)	Journal article; research support, non-U.S. government; research support, N.I.H., extramural	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery
36838790	10.3390/molecules28041802	pubmed.ncbi.nlm.nih.gov/36838790/	Critical review on the different roles of exosomes in TNBC and exosomal-mediated delivery of microRNA/siRNA/lncRNA and drug targeting signaling pathways in triple-negative breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
36522479	10.1038/s41416-022-02077-x	pubmed.ncbi.nlm.nih.gov/36522479/	Exosomal transfer of miR-181b-5p confers senescence-mediated doxorubicin resistance via modulating BCLAF1 in breast cancer	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-associated miRNA study includes cytotoxic treatment/drug response; abstract relevance alone does not establish causal or clinical validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
36639824	10.1186/s13046-022-02553-5	pubmed.ncbi.nlm.nih.gov/36639824/	Stroma-derived miR-214 coordinates tumor dissemination	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
38195382		pubmed.ncbi.nlm.nih.gov/38195382/	Study of KDM1A and VEGF changes as the responsible genes in the angiogenesis of breast cancer	Journal article	Title and abstract	C	Outside focused primary candidate set	Tamoxifen/endocrine treatment context, not cytotoxic chemotherapy
38158233	10.48095/ccko2023447	pubmed.ncbi.nlm.nih.gov/38158233/	Investigating changes in the post-transcriptional pattern of VEGF and CD146 genes carrying miR-573 in breast cancer cells treated with tamoxifen	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
37728084	10.2174/15665232236662302151035524	pubmed.ncbi.nlm.nih.gov/37728084/	Exosomal miRNAs as next-generation therapy vehicles in breast cancer	Review; journal article	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
36999414	10.2174/1389450124666230329123409	pubmed.ncbi.nlm.nih.gov/36999414/	MiRNAs overexpression and their role in breast cancer: Implications for cancer therapeutics	Review; journal article; research support, non-U.S. government	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
36892021	10.2174/13894501246662303081545 51	pubmed.ncbi.nlm.nih.gov/36892021/	Unveiling role of MicroRNAs in metastasizing triple negative breast cancer: From therapeutics to delivery	Review; journal article	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
36421832	10.3390/genes13112159	pubmed.ncbi.nlm.nih.gov/36421832/	Extracellular vesicle MicroRNA in malignant pleural effusion	Journal article; research support, non-U.S. government; research support, N.I.H., extramural	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
35986985	10.1016/j.bios.2022.114636	pubmed.ncbi.nlm.nih.gov/35986985/	Simultaneous detection of cancerous exosomal miRNA-21 and PD-L1 with a sensitive dual-cycling nanoprobe	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
36438660	10.3389/fmolb.2022.1022725	pubmed.ncbi.nlm.nih.gov/36438660/	The application of exosomes in the treatment of triple-negative breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34087417	10.1016/j.semcancer.2021.05.029	pubmed.ncbi.nlm.nih.gov/34087417/	Chaperonins in cancer: Expression, function, and migration in extracellular vesicles	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
36387168	10.3389/fonc.2022.1005812	pubmed.ncbi.nlm.nih.gov/36387168/	Comprehensive characterization of RNA cargo of extracellular vesicles in breast cancer patients undergoing neoadjuvant chemotherapy	Journal article	Title and abstract	B	Relevant candidate; full-text appraisal separate	Patient EV-miRNA measurements are associated with neoadjuvant chemotherapy response; relevance does not establish external validation
36281649	10.4081/ejh.2022.3529	pubmed.ncbi.nlm.nih.gov/36281649/	Docetaxel-resistant triple-negative breast cancer cell-derived exosomal lncRNA LINC00667 reduces the chemosensitivity of breast cancer cells to docetaxel via targeting miR-200b-3p/Bcl-2 axis	Journal article	Title and abstract	C	Outside focused primary candidate set	EV circRNA/lncRNA cargo is the primary transferred or measured species; downstream miRNA regulation is a different mechanism
36293478	10.3390/ijms232012625	pubmed.ncbi.nlm.nih.gov/36293478/	Circulating small EVs miRNAs as predictors of pathological response to neo-adjuvant therapy in breast cancer patients	Journal article	Title and abstract	B	Relevant candidate; full-text appraisal separate	Patient EV-miRNA measurements are associated with neoadjuvant chemotherapy response; relevance does not establish external validation
36276272	10.1155/2022/9494910	pubmed.ncbi.nlm.nih.gov/36276272/	Exosome-mediated transfer of miR-3613-5p enhances doxorubicin resistance by suppression of PTEN expression in breast cancer cells	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-associated miRNA study includes cytotoxic treatment/drug response; abstract relevance alone does not establish causal or clinical validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
36096820	10.1186/s12964-022-00945-w	pubmed.ncbi.nlm.nih.gov/36096820/	Small extracellular vesicles: From promoting pre-metastatic niche formation to therapeutic strategies in breast cancer	Journal article; review; video-audio media; research support, non-U.S. government	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
36076583	10.1016/j.biopha.2022.113484	pubmed.ncbi.nlm.nih.gov/36076583/	Regulation of mitochondrial fusion and mitophagy by intra-tumoral delivery of membrane-fused mitochondria or Midiv-1 enhances sensitivity to doxorubicin in triple-negative breast cancer	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Mitochondrial intervention and doxorubicin response include serum-microvesicle miRNA profiling; miRNA-mediated causality is not established by the abstract
35688263	10.1016/j.canlet.2022.215781	pubmed.ncbi.nlm.nih.gov/35688263/	Exosomes deliver lncRNA DARS-AS1 siRNA to inhibit chronic unpredictable mild stress-induced TNBC metastasis	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Tested EV delivery payload identified in the title is siRNA, not miRNA/anti-miRNA
36012638	10.3390/ijms23169371	pubmed.ncbi.nlm.nih.gov/36012638/	Breast cancer-delivered exosomal miRNA as liquid biopsy biomarkers for metastasis prediction: A focus on translational research with clinical applicability	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
35802880	10.1021/jacs.2c00119	pubmed.ncbi.nlm.nih.gov/35802880/	Molecular characterization of exosomes for subtype-based diagnosis of breast cancer	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
36002186	10.1136/jitc-2022-004832	pubmed.ncbi.nlm.nih.gov/36002186/	Snail-regulated exosomal microRNA-21 suppresses NLRP3 inflammasome activity to enhance cisplatin resistance	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-associated miRNA study includes cytotoxic treatment/drug response; abstract relevance alone does not establish causal or clinical validation
35915218	10.1038/s41598-022-17534-z	pubmed.ncbi.nlm.nih.gov/35915218/	Novel secretion modification region (SMR) peptide exhibits anti-metastatic properties in human breast cancer cells	Journal article; research support, N.I.H., extramural	Title and abstract	C	Outside focused primary candidate set	Peptide inhibition of EV release/EMT with protein targets; miRNA is an experimental knockdown tool, not the transferred therapeutic cargo
35679722	10.1016/j.biopha.2022.113239	pubmed.ncbi.nlm.nih.gov/35679722/	Emerging role of LINC00461 in cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
35955480	10.3390/ijms23158351	pubmed.ncbi.nlm.nih.gov/35955480/	Spotlight on exosomal non-coding RNAs in breast cancer: An *in silico* analysis to identify potential lncRNA/circRNA-miRNA-target axis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
35534582	10.1007/s11033-022-07472-4	pubmed.ncbi.nlm.nih.gov/35534582/	Prospect of exosomal circular RNAs in breast cancer: Presents and future	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
35460835	10.1016/j.cellsig.2022.110338	pubmed.ncbi.nlm.nih.gov/35460835/	Breast cancer derived exosomes promoted angiogenesis of endothelial cells in microenvironment via circHIPK3/miR-124-3p/MTDH axis	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
35813865	10.1155/2022/5483523	pubmed.ncbi.nlm.nih.gov/35813865/	Exosomes derived from tumor cells initiate breast cancer cell metastasis and chemoresistance through a MALAT1-dependent mechanism	Journal article	Title and abstract	C	Outside focused primary candidate set	EV circRNA/lncRNA cargo is the primary transferred or measured species; downstream miRNA regulation is a different mechanism
35655918	10.1155/2022/5762686	pubmed.ncbi.nlm.nih.gov/35655918/	Extracellular vesicles carrying miR-887-3p promote breast cancer cell drug resistance by targeting BTBD7 and activating the Notch1/Hes1 signaling pathway	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-associated miRNA study includes cytotoxic treatment/drug response; abstract relevance alone does not establish causal or clinical validation
35578228	10.1186/s12935-022-02594-y	pubmed.ncbi.nlm.nih.gov/35578228/	Exosomal microRNAs shuttling between tumor cells and macrophages: cellular interactions and novel therapeutic strategies	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
35628294	10.3390/ijms23105484	pubmed.ncbi.nlm.nih.gov/35628294/	Platelet-Derived miR-126-3p directly targets AKT2 and exerts anti-tumor effects in breast cancer cells: Further insights in platelet-cancer interplay	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV or membrane-vesicle delivery of miRNA/anti-miRNA is evaluated in a breast cancer model; relevance does not imply clinical validation
35563661	10.3390/ijms23095271	pubmed.ncbi.nlm.nih.gov/35563661/	Dormancy in breast cancer, the role of autophagy, lncRNAs, miRNAs and exosomes	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
35565446	10.3390/cancers14092317	pubmed.ncbi.nlm.nih.gov/35565446/	Circulating miRNAs in breast cancer diagnosis and prognosis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
35421879	10.1039/d1nr08539e	pubmed.ncbi.nlm.nih.gov/35421879/	Smartly responsive DNA-miRNA hybrids packaged in exosomes for synergistic enhancement of cancer cell apoptosis	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV or membrane-vesicle delivery of miRNA/anti-miRNA is evaluated in a breast cancer model; relevance does not imply clinical validation
35398617	10.1016/j.prp.2022.153854	pubmed.ncbi.nlm.nih.gov/35398617/	Exosomal-microRNA transcriptome profiling of Parental and CSC-like MDA-MB-231 cells in response to cisplatin treatment	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-associated miRNA study includes cytotoxic treatment/drug response; abstract relevance alone does not establish causal or clinical validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
35023068	10.1007/s13258-021-01200-1	pubmed.ncbi.nlm.nih.gov/35023068/	Mesenchymal stem cell-derived exosome miR-342-3p inhibits metastasis and chemo-resistance of breast cancer through regulating ID4	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-associated miRNA study includes cytotoxic treatment/drug response; abstract relevance alone does not establish causal or clinical validation
35312297	10.1021/acssensors.1c02717	pubmed.ncbi.nlm.nih.gov/35312297/	DNA nanowire guided-catalyzed hairpin assembly nanoprobe for *in situ* profiling of circulating extracellular vesicle-associated microRNAs	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
35562884	10.3390/ijms23094493	pubmed.ncbi.nlm.nih.gov/35562884/	Exosomal and non-exosomal microRNAs: new kids on the block for cancer therapy	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
35430766	10.1002/jev2.12187	pubmed.ncbi.nlm.nih.gov/35430766/	Robust delivery of RIG-I agonists using extracellular vesicles for anti-cancer immunotherapy	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV or membrane-vesicle delivery of miRNA/anti-miRNA is evaluated in a breast cancer model; relevance does not imply clinical validation
35080041	10.1111/boc.202100081	pubmed.ncbi.nlm.nih.gov/35080041/	Exosomes in breast cancer management: Where do we stand? A literature review	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
35355608	10.3389/fmed.2022.827206	pubmed.ncbi.nlm.nih.gov/35355608/	Case report: Analysis of plasma extracellular vesicles in a triple negative spindle-cell metaplastic breast cancer patient	Case reports; journal article	Title and abstract	C	Outside focused primary candidate set	Single-patient EV molecular characterization without a tested chemotherapy-response biomarker endpoint
35224148	10.1016/j.gendis.2020.11.015	pubmed.ncbi.nlm.nih.gov/35224148/	Tumor microenvironment pathways: Cross regulation in breast cancer metastasis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
35091089	10.1016/j.phrs.2022.106098	pubmed.ncbi.nlm.nih.gov/35091089/	Endoplasmic reticulum stress promotes breast cancer cells to release exosomes circ_0001142 and induces M2 polarization of macrophages to regulate tumor progression	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
34879180	10.1002/adhm.202101387	pubmed.ncbi.nlm.nih.gov/34879180/	Engineered cell-derived vesicles displaying targeting peptide and functionalized with nanocarriers for therapeutic microRNA delivery to triple-negative breast cancer in mice	Journal article; research support, N.I.H., extramural; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV or membrane-vesicle delivery of miRNA/anti-miRNA is evaluated in a breast cancer model; relevance does not imply clinical validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
35105806	10.1073/pnas.2114006119	pubmed.ncbi.nlm.nih.gov/35105806/	miR-182 targeting reprograms tumor-associated macrophages and limits breast cancer progression	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV or membrane-vesicle delivery of miRNA/anti-miRNA is evaluated in a breast cancer model; relevance does not imply clinical validation
35032831	10.1016/j.prp.2022.153764	pubmed.ncbi.nlm.nih.gov/35032831/	Signaling pathways modulated by miRNAs in breast cancer angiogenesis and new therapeutics	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
35200555	10.3390/curroncol29020055	pubmed.ncbi.nlm.nih.gov/35200555/	Circulating exosomal microRNAs as predictive biomarkers of neoadjuvant chemotherapy response in breast cancer	Journal article; research support, non-U.S. government; research support, U.S. government, non-P.H.S.	Title and abstract	B	Relevant candidate; full-text appraisal separate	Patient EV-miRNA measurements are associated with neoadjuvant chemotherapy response; relevance does not establish external validation
34875250	10.1016/j.lfs.2021.120210	pubmed.ncbi.nlm.nih.gov/34875250/	Enigmatic role of exosomes in breast cancer progression and therapy	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
35027847	10.2147/CMAR.S327621	pubmed.ncbi.nlm.nih.gov/35027847/	Hypoxic breast cancer cell-derived exosomal SNHG1 promotes breast cancer growth and angiogenesis via regulating miR-216b-5p/JAK2 axis	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
36320176	10.1177/15330338221135724	pubmed.ncbi.nlm.nih.gov/36320176/	Linking GOLPH3 and extracellular vesicles content-a potential new route in cancer physiopathology and a promising therapeutic target is in sight?	Journal article; review; research support, non-U.S. government	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34967294	10.2174/1389201023666211230113658	pubmed.ncbi.nlm.nih.gov/34967294/	Recent advances of nanotechnology in the diagnosis and therapy of triple- negative breast cancer (TNBC)	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
35036357	10.3389/fonc.2021.839904	pubmed.ncbi.nlm.nih.gov/35036357/	exosomal microRNA-221-3p confers adriamycin resistance in breast cancer cells by targeting PIK3R1	Retraction notice	Title and publication metadata	N	Outside focused primary candidate set	Correction/retraction notice, not an independent original study; retained in retrieval ledger
34970595	10.3389/fmolb.2021.770413	pubmed.ncbi.nlm.nih.gov/34970595/	Long-term cognitive dysfunction in cancer survivors	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34906143	10.1186/s12935-021-02370-4	pubmed.ncbi.nlm.nih.gov/34906143/	Exosomes from tamoxifen-resistant breast cancer cells transmit drug resistance partly by delivering miR-9-5p	Published erratum	Title and publication metadata	N	Outside focused primary candidate set	Correction/retraction notice, not an independent original study; retained in retrieval ledger

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
34671433	10.3892/ol.2021.13080	pubmed.ncbi.nlm.nih.gov/34671433/	Exosomal miRNA profiles of triple-negative breast cancer in neoadjuvant treatment	Journal article	Title and abstract	B	Relevant candidate; full-text appraisal separate	Patient exosomal miRNA profiles are compared by neoadjuvant chemotherapy response; exploratory discrimination, not external validation
34614416	10.1016/j.lfs.2021.120015	pubmed.ncbi.nlm.nih.gov/34614416/	Evaluating the influence of human umbilical cord mesenchymal stem cells-derived exosomes loaded with miR-3182 on metastatic performance of triple negative breast cancer cells	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation
34829498	10.3390/diagnostics11112151	pubmed.ncbi.nlm.nih.gov/34829498/	Advances of exosomal miRNAs in breast cancer progression and diagnosis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34898576	10.3390/curroncol28060382	pubmed.ncbi.nlm.nih.gov/34898576/	Advances in breast cancer management and extracellular vesicle research, a bibliometric analysis	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34771077	10.3390/molecules26216661	pubmed.ncbi.nlm.nih.gov/34771077/	Towards unravelling the role of ERα-targeting miRNAs in the exosome-mediated transferring of the hormone resistance	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
34378285	10.1111/jog.14983	pubmed.ncbi.nlm.nih.gov/34378285/	Exosome miR-134-5p restrains breast cancer progression via regulating PI3K/AKT pathway by targeting ARHGAP1	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation
34769002	10.3390/ijms222111570	pubmed.ncbi.nlm.nih.gov/34769002/	Ionizing radiation promotes invasive potential of breast cancer cells: The role of exosomes in the process	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
34722539	10.3389/fcell.2021.753706	pubmed.ncbi.nlm.nih.gov/34722539/	Long non-coding RNA DANCR in cancer: Roles, mechanisms and implications	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34707990	10.3389/fonc.2021.738945	pubmed.ncbi.nlm.nih.gov/34707990/	Tumor-derived exosomal non-coding RNAs: The emerging mechanisms and potential clinical applications in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34657047		pubmed.ncbi.nlm.nih.gov/34657047/	Clinical application of liquid biopsy for breast cancer diagnosis and treatment	Journal article	Title and abstract	R	Outside focused primary candidate set	Narrative clinical overview; no original focused treatment-response dataset described in the abstract

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
34245773	10.1016/j.lfs.2021.119800	pubmed.ncbi.nlm.nih.gov/34245773/	Transfer of miRNA in tumor-derived exosomes suppresses breast tumor cell invasion and migration by inducing M1 polarization in macrophages	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation
34638377	10.3390/cancers13194894	pubmed.ncbi.nlm.nih.gov/34638377/	Circulating and intracellular miRNAs as prognostic and predictive factors in HER2-positive early breast cancer treated with neoadjuvant chemotherapy: A review of the literature	Journal article	Title and publication metadata	R	Outside focused primary candidate set	Title identifies an editorial or literature review; not original primary evidence
34572835	10.3390/cancers13184608	pubmed.ncbi.nlm.nih.gov/34572835/	Extracellular vesicle-associated miRNAs and chemoresistance: A systematic review	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34465793	10.1038/s41467-021-25473-y	pubmed.ncbi.nlm.nih.gov/34465793/	Exosomal miR-19a and IBSP cooperate to induce osteolytic bone metastasis of estrogen receptor-positive breast cancer	Journal article; research support, N.I.H., extramural	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
34589347	10.7759/cureus.17441	pubmed.ncbi.nlm.nih.gov/34589347/	Exosome-derived microRNA: Efficacy in cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34292880	10.18632/aging.203298	pubmed.ncbi.nlm.nih.gov/34292880/	Exosomal miRNA-205 promotes breast cancer chemoresistance and tumorigenesis through E2F1	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	Tamoxifen/endocrine resistance, outside focused cytotoxic chemotherapy-response criteria
34298743	10.3390/cancers13143530	pubmed.ncbi.nlm.nih.gov/34298743/	Identification and roles of miR-29b-1-3p and miR29a-3p-regulated and non-regulated lncRNAs in endocrine-sensitive and resistant breast cancer cells	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
34295807	10.3389/fonc.2021.639961	pubmed.ncbi.nlm.nih.gov/34295807/	Circular RNA circ-MMP11 contributes to lapatinib resistance of breast cancer cells by regulating the miR-153-3p/ANLN axis	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
34269309	10.4103/jcrt.jcrt_280_21	pubmed.ncbi.nlm.nih.gov/34269309/	Detection significance of miR-3662, miR-146a, and miR-1290 in serum exosomes of breast cancer patients	Journal article; observational study	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
33770377	10.1007/s12282-021-01218-z	pubmed.ncbi.nlm.nih.gov/33770377/	Human umbilical cord mesenchymal stem cell-derived exosomes inhibit migration and invasion of breast cancer cells via miR-21-5p/ZNF367 pathway	Journal article	Title and abstract	C	Outside focused primary candidate set	Natural EV effects on migration/metastasis with downstream miRNA attribution; no tested cytotoxic-response or separately loaded miRNA-delivery intervention
32497683	10.1016/j.semcancer.2020.05.017	pubmed.ncbi.nlm.nih.gov/32497683/	Dissecting miRNA facilitated physiology and function in human breast cancer for therapeutic intervention	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
34307654	10.1155/2021/5516078	pubmed.ncbi.nlm.nih.gov/34307654/	Exosomes of mesenchymal stem cells as a proper vehicle for transfecting miR-145 into the breast cancer cell line and its effect on metastasis	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation
34136902	10.1042/CS20210059	pubmed.ncbi.nlm.nih.gov/34136902/	Cancer therapy-related cardiac dysfunction: is endothelial dysfunction at the heart of the matter?	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33544478	10.1515/cclm-2020-1685	pubmed.ncbi.nlm.nih.gov/33544478/	Updates on liquid biopsy: Current trends and future perspectives for clinical application in solid tumors	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
34207035	10.3390/ijms22126526	pubmed.ncbi.nlm.nih.gov/34207035/	Tumor-associated macrophages as multifaceted regulators of breast tumor growth	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33627501	10.1158/1541-7786.MCR-20-0952	pubmed.ncbi.nlm.nih.gov/33627501/	Exosomes in breast cancer-Mechanisms of action and clinical potential	Journal article; research support, N.I.H., extramural; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33410095	10.1007/s12015-020-10089-4	pubmed.ncbi.nlm.nih.gov/33410095/	Delivery of miR-381-3p mimic by mesenchymal stem cell-derived exosomes inhibits triple negative breast cancer aggressiveness; an *in vitro* study	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation
33154575	10.1038/s41417-020-00244-x	pubmed.ncbi.nlm.nih.gov/33154575/	Elevating microRNA-1-3p shuttled by cancer-associated fibroblasts-derived extracellular vesicles suppresses breast cancer progression and metastasis by inhibiting GLIS1	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
33971402	10.1016/j.ebiom.2021.103365	pubmed.ncbi.nlm.nih.gov/33971402/	Circulating extracellular vesicles are effective biomarkers for predicting response to cancer therapy	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33140190	10.1007/s00262-020-02762-x	pubmed.ncbi.nlm.nih.gov/33140190/	*In vitro* and *in vivo* evaluation of anti-tumoral effect of M1 phenotype induction in macrophages by miR-130 and miR-33 containing exosomes	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation
33926445	10.1186/s12935-021-01944-6	pubmed.ncbi.nlm.nih.gov/33926445/	Exosomes from tamoxifen-resistant breast cancer cells transmit drug resistance partly by delivering miR-9-5p	Published erratum	Title and publication metadata	N	Outside focused primary candidate set	Correction/retraction notice, not an independent original study; retained in retrieval ledger
33599630	10.1039/d0an02224a	pubmed.ncbi.nlm.nih.gov/33599630/	Breast cancer plasma biopsy by *in situ* determination of exosomal microRNA-1246 with a molecular beacon	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
33823894	10.1186/s13046-021-01901-1	pubmed.ncbi.nlm.nih.gov/33823894/	Chemotherapy-elicited exosomal miR-378a-3p and miR-378d promote breast cancer stemness and chemoresistance via the activation of EZH2/STAT3 signaling	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Chemotherapy-elicited EV miR-378a-3p/miR-378d transfer and resistance are experimentally evaluated

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33820555	10.1186/s13578-021-00556-x	pubmed.ncbi.nlm.nih.gov/33820555/	Long non-coding RNA NEAT1 transported by extracellular vesicles contributes to breast cancer development by sponging microRNA-141-3p and regulating KLF12	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
33821219	10.1515/med-2021-0249	pubmed.ncbi.nlm.nih.gov/33821219/	Exosomal-mediated transfer of OIP5-AS1 enhanced cell chemoresistance to trastuzumab in breast cancer via up-regulating HMGB3 by sponging miR-381-3p	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
33752173	10.18632/aging.202802	pubmed.ncbi.nlm.nih.gov/33752173/	Exosomal miR-222 from adriamycin-resistant MCF-7 breast cancer cells promote macrophages M2 polarization via PTEN/AKT to induce tumor progression	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	EV miR-222 is measured in adriamycin-resistant cells and chemoresistant patient materials, with macrophage functional studies; resistance reversal is not established by this abstract
33803776	10.3390/biomedicines9030312	pubmed.ncbi.nlm.nih.gov/33803776/	The role of exosomes in breast cancer diagnosis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
33544643	10.1080/17425255.2021.1887139	pubmed.ncbi.nlm.nih.gov/33544643/	The role of non-coding RNAs in ABC transporters regulation and their clinical implications of multidrug resistance in cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33557112	10.3390/ijms22041557	pubmed.ncbi.nlm.nih.gov/33557112/	miR-21 is required for the epithelial-mesenchymal transition in MDA-MB-231 breast cancer cells	Journal article	Title and abstract	C	Outside focused primary candidate set	Cellular miRNA knockout alters EMT and EV release; not a tested EV-miRNA treatment-response or delivery intervention
33345445	10.15252/embr.202051239	pubmed.ncbi.nlm.nih.gov/33345445/	Cancer-secreted miRNAs regulate amino-acid-induced mTORC1 signaling and fibroblast protein synthesis	Journal article; research support, N.I.H., extramural; research support, U.S. government, non-P.H.S.	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
33373870	10.1016/j.ejca.2020.11.033	pubmed.ncbi.nlm.nih.gov/33373870/	Exosomes and exosomal RNAs in breast cancer: A status update	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33309716	10.1016/j.lfs.2020.118871	pubmed.ncbi.nlm.nih.gov/33309716/	Exosomes derived from miR-34a-overexpressing mesenchymal stem cells inhibit *in vitro* tumor growth: A new approach for drug delivery	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
33467725	10.3390/ijms22020844	pubmed.ncbi.nlm.nih.gov/33467725/	Delivery of miR-424-5p via extracellular vesicles promotes the apoptosis of MDA-MB-231 TNBC cells in the tumor microenvironment	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation
33451320	10.1186/s12935-020-01659-0	pubmed.ncbi.nlm.nih.gov/33451320/	Exosomes from tamoxifen-resistant breast cancer cells transmit drug resistance partly by delivering miR-9-5p	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
33414420	10.1038/s41419-020-03304-0	pubmed.ncbi.nlm.nih.gov/33414420/	STIM1 promotes angiogenesis by reducing exosomal miR-145 in breast cancer MDA-MB-231 cells	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
33249048	10.1016/j.intimp.2020.107198	pubmed.ncbi.nlm.nih.gov/33249048/	Exosome-mediated miR-33 transfer induces M1 polarization in mouse macrophages and exerts antitumor effect in 4T1 breast cancer cell line	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	Experimentally altered miRNA delivered through EVs is evaluated as a breast cancer intervention; preclinical efficacy is not clinical validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
33181174	10.1016/j.lfs.2020.118687	pubmed.ncbi.nlm.nih.gov/33181174/	$PGRN^{-/-}$ TAMs-derived exosomes inhibit breast cancer cell invasion and migration and its mechanism exploration	Journal article	Title and abstract	C	Outside focused primary candidate set	Natural EV effects on migration/metastasis with downstream miRNA attribution; no tested cytotoxic-response or separately loaded miRNA-delivery intervention
33374139	10.3390/ph14010008	pubmed.ncbi.nlm.nih.gov/33374139/	Adipose MSCs suppress MCF7 and MDA-MB-231 breast cancer metastasis and EMT pathways leading to dormancy via exosomal-miRNAs following co-culture interaction	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA/dormancy or transfer with chemotherapy response; mixed models and evidence levels require full-text appraisal
33294586	10.1016/j.omto.2020.10.008	pubmed.ncbi.nlm.nih.gov/33294586/	Mesenchymal stem cell-secreted exosome promotes chemoresistance in breast cancer via enhancing miR-21-5p-mediated S100A6 expression	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA/dormancy or transfer with chemotherapy response; mixed models and evidence levels require full-text appraisal
33311449	10.1038/s41419-020-03224-z	pubmed.ncbi.nlm.nih.gov/33311449/	Anti-PD1 therapy induces lymphocyte-derived exosomal miRNA-4315 release inhibiting Bim-mediated apoptosis of tumor cells	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA/dormancy or transfer with chemotherapy response; mixed models and evidence levels require full-text appraisal

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
33324075	10.2147/OTT.S281909	pubmed.ncbi.nlm.nih.gov/33324075/	The role of exosomes in the female reproductive system and breast cancers	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33068176	10.1007/s00280-020-04168-z	pubmed.ncbi.nlm.nih.gov/33068176/	Exosomal miR-1246 and miR-155 as predictive and prognostic biomarkers for trastuzumab-based therapy resistance in HER2-positive breast cancer	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
33255471	10.3390/ijms21238905	pubmed.ncbi.nlm.nih.gov/33255471/	Novel miRNA targets and therapies in the triple-negative breast cancer microenvironment: An emerging hope for a challenging disease	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33282730	10.3389/fonc.2020.563779	pubmed.ncbi.nlm.nih.gov/33282730/	Triple-negative breast cancer comparison with canine mammary tumors from light microscopy to molecular pathology	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33173749	10.1002/advs.202002518	pubmed.ncbi.nlm.nih.gov/33173749/	$CD63^{+}$ cancer-associated fibroblasts confer tamoxifen resistance to breast cancer cells through exosomal miR-22	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
32987253	10.1016/j.ejca.2020.08.020	pubmed.ncbi.nlm.nih.gov/32987253/	Immunosuppressive profiles in liquid biopsy at diagnosis predict response to neoadjuvant chemotherapy in triple-negative breast cancer	Journal article; research support, non-U.S. government	Title and abstract	B	Relevant candidate; full-text appraisal separate	Patient liquid-biopsy exosomal miRNA profiles are associated with neoadjuvant chemotherapy response
33116515	10.2147/IJN.S272378	pubmed.ncbi.nlm.nih.gov/33116515/	Cancer-derived exosomes: Their role in cancer biology and biomarker development	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
33061571	10.2147/CMAR.S270200	pubmed.ncbi.nlm.nih.gov/33061571/	Adipose mesenchymal stem cell-derived exosomal microRNA-1236 reduces resistance of breast cancer cells to cisplatin by suppressing SLC9A1 and the Wnt/β-catenin signaling	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA/dormancy or transfer with chemotherapy response; mixed models and evidence levels require full-text appraisal
32756532	10.12659/MSM.922253	pubmed.ncbi.nlm.nih.gov/32756532/	Exosomes mediated transfer of Circ_UBE2D2 enhances the resistance of breast cancer to tamoxifen by binding to miR-200a-3p	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
32805688	10.1016/j.cancergen.2020.08.005	pubmed.ncbi.nlm.nih.gov/32805688/	MicroRNAs in breast cancer: New maestros defining the melody	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
32344463	10.1002/iub.2292	pubmed.ncbi.nlm.nih.gov/32344463/	miR-3613-3p from carcinoma-associated fibroblasts exosomes promoted breast cancer cell proliferation and metastasis by regulating SOCS2 expression	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
32646059	10.3390/cancers12071827	pubmed.ncbi.nlm.nih.gov/32646059/	Exosomal microRNAs and organotropism in breast cancer metastasis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
32360582	10.1016/j.phrs.2020.104843	pubmed.ncbi.nlm.nih.gov/32360582/	Adipose-derived mesenchymal stem cells and extracellular vesicles confer antitumor activity in preclinical treatment of breast cancer	Comparative study; journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated miRNA or anti-miRNA intervention is tested in a breast cancer model; not evidence of clinical readiness
31956955	10.1007/s12010-020-03244-7	pubmed.ncbi.nlm.nih.gov/31956955/	SNHG3 functions as miRNA sponge to promote breast cancer cells growth through the metabolic reprogramming	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies circRNA/lncRNA-centered cargo or competing-RNA regulation, not direct EV-miRNA therapeutic transfer
32398867	10.1038/s41388-020-1322-4	pubmed.ncbi.nlm.nih.gov/32398867/	Cancer exosome-derived miR-9 and miR-181a promote the development of early-stage MDSCs via interfering with SOCS3 and PIAS3 respectively in breast cancer	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
31898802	10.1007/s12015-019-09944-w	pubmed.ncbi.nlm.nih.gov/31898802/	Delivery of LNA-antimiR-142-3p by mesenchymal stem cells-derived exosomes to breast cancer stem cells reduces tumorigenicity	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated miRNA or anti-miRNA intervention is tested in a breast cancer model; not evidence of clinical readiness
32481745	10.3390/ijms21113851	pubmed.ncbi.nlm.nih.gov/32481745/	Cdc42-dependent transfer of mir301 from breast cancer-derived extracellular vesicles regulates the matrix modulating ability of astrocytes at the blood-brain barrier	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
32466456	10.3390/cancers12061355	pubmed.ncbi.nlm.nih.gov/32466456/	The possible influence of mediterranean diet on extracellular vesicle miRNA expression in breast cancer survivors	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
32384893	10.1186/s12943-020-01206-5	pubmed.ncbi.nlm.nih.gov/32384893/	LncRNA BCRT1 promotes breast cancer progression by targeting miR-1303/PTBP3 axis	Journal article; research support, non-U.S. government; retracted publication	Title and publication metadata	RET	Outside focused primary candidate set	Indexed as a retracted publication; excluded from the candidate evidence set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
31650530	10.1002/jcp.29367	pubmed.ncbi.nlm.nih.gov/31650530/	miR-188-5p suppresses cellular proliferation and migration via IL6ST: A potential non-invasive diagnostic biomarker for breast cancer	Comparative study; journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
32426266	10.3389/fonc.2020.00441	pubmed.ncbi.nlm.nih.gov/32426266/	Exosomal microRNA-221-3p confers adriamycin resistance in breast cancer cells by targeting PIK3R1	Journal article; retracted publication	Title and abstract	RET	Outside focused primary candidate set	PubMed explicitly tags this record as 'retracted publication'; excluded from the relevant candidate set and evidentiary support
32355577	10.7717/peerj.9021	pubmed.ncbi.nlm.nih.gov/32355577/	Identification of exosomal miRNAs associated with the anthracycline-induced liver injury in postoperative breast cancer patients by small RNA sequencing	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery
35582044	10.20517/cdr.2019.90	pubmed.ncbi.nlm.nih.gov/35582044/	Predictive value of exosomes and their cargo in drug response/resistance of breast cancer patients	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
31922312	10.1096/fj.201902434R	pubmed.ncbi.nlm.nih.gov/31922312/	Exosomes co-expressing AQP5-targeting miRNAs and IL-4 receptor-binding peptide inhibit the migration of human breast cancer cells	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated miRNA or anti-miRNA intervention is tested in a breast cancer model; not evidence of clinical readiness

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
31098627	10.1093/cvr/cvz108	pubmed.ncbi.nlm.nih.gov/31098627/	Intravenous administration of cardiac progenitor cell-derived exosomes protects against doxorubicin/trastuzumab-induced cardiac toxicity	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	Cardioprotection against cancer-treatment toxicity; endpoint is not breast tumor response or tumor-targeted miRNA delivery
31763681	10.1042/BSR20190303	pubmed.ncbi.nlm.nih.gov/31763681/	Identification of exosomal miR-455-5p and miR-1255a as therapeutic targets for breast cancer	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	Public-data bioinformatic prediction of therapeutic targets without tested chemotherapy response or a miRNA-delivery intervention
31969559	10.1038/s41419-020-2250-5	pubmed.ncbi.nlm.nih.gov/31969559/	Exosome-transmitted miR-567 reverses trastuzumab resistance by inhibiting ATG5 in breast cancer	Journal article; research support, non-U.S. government; retracted publication	Title and abstract	RET	Outside focused primary candidate set	PubMed explicitly tags this record as Retracted Publication; excluded from the relevant candidate set and evidentiary support
31833519	10.1039/c9nr09011h	pubmed.ncbi.nlm.nih.gov/31833519/	Use of lung-specific exosomes for miRNA-126 delivery in non-small cell lung cancer	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery
31665654	10.1016/j.jnutbio.2019.108242	pubmed.ncbi.nlm.nih.gov/31665654/	Polyunsaturated fatty acids modulate the delivery of platelet microvesicle-derived microRNAs into human breast cancer cell lines	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA/dormancy or transfer with chemotherapy response; mixed models and evidence levels require full-text appraisal

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
31766495	10.3390/cells8121482	pubmed.ncbi.nlm.nih.gov/31766495/	MicroRNA-A tumor trojan horse for tumor-associated macrophages	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
31322822	10.1002/iub.2116	pubmed.ncbi.nlm.nih.gov/31322822/	Emerging roles of exosomal miRNAs in breast cancer drug resistance	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
31683635	10.3390/cells8111361	pubmed.ncbi.nlm.nih.gov/31683635/	MicroRNAs contribute to breast cancer invasiveness	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
31696054	10.3389/fonc.2019.01076	pubmed.ncbi.nlm.nih.gov/31696054/	Exosomes derived from microRNA-148b-3p-overexpressing human umbilical cord mesenchymal stem cells restrain breast cancer progression	Journal article; retracted publication	Title and abstract	RET	Outside focused primary candidate set	PubMed database explicitly tags this record as ‘retracted publication’; excluded from the relevant candidate set and evidentiary support
31233837	10.1016/j.canlet.2019.06.012	pubmed.ncbi.nlm.nih.gov/31233837/	Tumor-derived extracellular vesicles in breast cancer: From bench to bedside	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
35582569	10.20517/cdr.2019.17	pubmed.ncbi.nlm.nih.gov/35582569/	The role of exosomal microRNAs; focus on clinical applications in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
31500658	10.1186/s13045-019-0778-6	pubmed.ncbi.nlm.nih.gov/31500658/	Cancer-associated adipocytes: Key players in breast cancer progression	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
31481080	10.1186/s12951-019-0526-7	pubmed.ncbi.nlm.nih.gov/31481080/	Functional exosome-mediated co-delivery of doxorubicin and hydrophobically modified microRNA 159 for triple-negative breast cancer therapy	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated miRNA or anti-miRNA intervention is tested in a breast cancer model; not evidence of clinical readiness
31385464	10.1002/cam4.2454	pubmed.ncbi.nlm.nih.gov/31385464/	Breast cancer cell-derived exosomal miR-20a-5p promotes the proliferation and differentiation of osteoclasts by targeting SRCIN1	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
31395836	10.3390/ijms20163884	pubmed.ncbi.nlm.nih.gov/31395836/	The role of exosomal microRNAs in the tumor microenvironment of breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
30916359	10.1002/jcp.28537	pubmed.ncbi.nlm.nih.gov/30916359/	miR-31 shuttled by halofuginone-induced exosomes suppresses MFC-7 cell proliferation by modulating the HDAC2/cell cycle signaling axis	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	Halofuginone-induced natural EV-miRNA changes and growth effects; outside the focused conventional cytotoxic-response or engineered miRNA-delivery endpoint
31118200	10.1158/0008-5472.CAN-18-4055	pubmed.ncbi.nlm.nih.gov/31118200/	Chemotherapy-induced extracellular vesicle miRNAs promote breast cancer stemness by targeting ONECUT2	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	EV-associated miRNA study includes chemotherapy exposure, resistant-cell profiling or drug response; profiling alone does not establish cargo causality
31354350	10.2147/CMAR.S201335	pubmed.ncbi.nlm.nih.gov/31354350/	Bioinformatics analysis of dysregulated microRNAs in exosomes from docetaxel-resistant and parental human breast cancer cells	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	EV-associated miRNA study includes chemotherapy exposure, resistant-cell profiling or drug response; profiling alone does not establish cargo causality
31129098	10.1016/j.ebiom.2019.05.038	pubmed.ncbi.nlm.nih.gov/31129098/	Ca^{2+} and CACNA1H mediate targeted suppression of breast cancer brain metastasis by AM RF EMF	Journal article	Title and abstract	C	Outside focused primary candidate set	Electromagnetic-field/radiation intervention and brain metastasis; EV-miRNA modulation is not a focused cytotoxic or miRNA-delivery endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
31044053	10.1080/20013078.2019.1599680	pubmed.ncbi.nlm.nih.gov/31044053/	Tumor-secreted extracellular vesicles promote the activation of cancer-associated fibroblasts via the transfer of microRNA-125b	Journal article	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
30840889	10.1016/j.celrep.2019.02.023	pubmed.ncbi.nlm.nih.gov/30840889/	MicroRNA-mediated suppression of the TGF-β pathway confers transmissible and reversible CDK4/6 inhibitor resistance	Journal article; research support, N.I.H., extramural; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
30098225	10.1002/ijc.31792	pubmed.ncbi.nlm.nih.gov/30098225/	Prodrug suicide gene therapy for cancer targeted intracellular by mesenchymal stem cell exosomes	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	Therapeutic EV cargo is suicide-gene mRNA; the abstract states miRNAs were not associated with the therapeutic effect
30728048	10.1186/s13058-019-1109-0	pubmed.ncbi.nlm.nih.gov/30728048/	Exosomal miRNA profile as complementary tool in the diagnostic and prediction of treatment response in localized breast cancer under neoadjuvant chemotherapy	Journal article; research support, non-U.S. government	Title and abstract	B	Relevant candidate; full-text appraisal separate	Patient exosomal miRNA profiles during/before neoadjuvant treatment; exploratory biomarker evidence, not assumed external validation

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
31424364	10.2174/1389200220666190819151946	pubmed.ncbi.nlm.nih.gov/31424364/	Cisplatin-resistant MDA-MB-231 Cell-derived exosomes increase the resistance of recipient cells in an exosomal miR-423-5p-dependent manner	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	EV-associated miRNA study includes chemotherapy exposure, resistant-cell profiling or drug response; profiling alone does not establish cargo causality
30760122	10.1177/1533033818821421	pubmed.ncbi.nlm.nih.gov/30760122/	Exosomes: A promising avenue for the diagnosis of breast cancer	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
30201690	10.1042/BSR20181090	pubmed.ncbi.nlm.nih.gov/30201690/	Analysis of miRNA signature differentially expressed in exosomes from adriamycin-resistant and parental human breast cancer cells	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	EV-associated miRNA study includes chemotherapy exposure, resistant-cell profiling or drug response; profiling alone does not establish cargo causality
30545127	10.3390/ncrna4040040	pubmed.ncbi.nlm.nih.gov/30545127/	Non-coding RNAs in breast cancer: Intracellular and intercellular communication	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
30514916	10.1038/s41598-018-35968-2	pubmed.ncbi.nlm.nih.gov/30514916/	Extracellular vesicles produced in B cells deliver tumor suppressor miR-335 to breast cancer cells disrupting oncogenic programming *in vitro* and *in vivo*	Journal article; research support, N.I.H., extramural	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated therapeutic miRNA or anti-miRNA delivery is evaluated in breast cancer models

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
30272274	10.3892/ijo.2018.4571	pubmed.ncbi.nlm.nih.gov/30272274/	Regulation of RAB22A by miR-193b inhibits breast cancer growth and metastasis mediated by exosomes	Journal article	Title and abstract	C	Outside focused primary candidate set	EV-miRNA biology, target regulation or profiling without the focused cytotoxic-response or EV-loaded miRNA therapeutic-delivery endpoint
30173296	10.1007/s10549-018-4925-5	pubmed.ncbi.nlm.nih.gov/30173296/	Extracellular vesicles from triple-negative breast cancer cells promote proliferation and drug resistance in non-tumorigenic breast cells	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	EV-associated miRNA study includes chemotherapy exposure, resistant-cell profiling or drug response; profiling alone does not establish cargo causality
30346694	10.1021/acsnano.8b02587	pubmed.ncbi.nlm.nih.gov/30346694/	Tumor cell-derived extracellular vesicle-coated nanocarriers: An efficient theranostic platform for the cancer-specific delivery of anti-miR-21 and imaging agents	Journal article; research support, N.I.H., extramural; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated therapeutic miRNA or anti-miRNA delivery is evaluated in breast cancer models
30538455	10.2147/IJN.S182384	pubmed.ncbi.nlm.nih.gov/30538455/	Exosome-mediated delivery of functionally active miRNA-142-3p inhibitor reduces tumorigenicity of breast cancer *in vitro* and *in vivo*	Journal article	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated therapeutic miRNA or anti-miRNA delivery is evaluated in breast cancer models

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
30385810	10.1038/s41598-018-34698-9	pubmed.ncbi.nlm.nih.gov/30385810/	Enoxacin and bis-enoxacin stimulate 4T1 murine breast cancer cells to release extracellular vesicles that inhibit osteoclastogenesis	Journal article; research support, N.I.H., extramural; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	EV effects on osteoclastogenesis and bone remodeling; no focused tumor cytotoxic-response or miRNA-delivery intervention
29777792	10.1016/j.mvr.2018.05.007	pubmed.ncbi.nlm.nih.gov/29777792/	Human cancer cells suppress behaviors of endothelial progenitor cells through miR-21 targeting IL6R	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
30061173	10.1042/BSR20180110	pubmed.ncbi.nlm.nih.gov/30061173/	D-Rhamnose β-hederin reverses chemoresistance of breast cancer cells by regulating exosome-mediated resistance transmission	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	EV-associated miRNA study includes chemotherapy exposure, resistant-cell profiling or drug response; profiling alone does not establish cargo causality
30348200	10.1186/s13058-018-1059-y	pubmed.ncbi.nlm.nih.gov/30348200/	Metastatic breast cancer cells overexpress and secrete miR-218 to regulate type I collagen deposition by osteoblasts	Journal article; research support, N.I.H., extramural	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
30301470	10.1186/s12916-018-1163-y	pubmed.ncbi.nlm.nih.gov/30301470/	Specific microRNA signatures in exosomes of triple-negative and HER2-positive breast cancer patients undergoing neoadjuvant therapy within the GeparSixto trial	Journal article; multicenter study; research support, non-U.S. government	Title and abstract	B	Relevant candidate; full-text appraisal separate	Patient exosomal miRNA profiles during/before neoadjuvant treatment; exploratory biomarker evidence, not assumed external validation
30081925	10.1186/s12964-018-0255-9	pubmed.ncbi.nlm.nih.gov/30081925/	Functional implications of Rab27 GTPases in cancer	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
30026327	10.1158/0008-5472.CAN-18-1102	pubmed.ncbi.nlm.nih.gov/30026327/	Loss of XIST in breast cancer activates MSN-c-Met and reprograms microglia via exosomal miRNA to promote brain metastasis	Journal article; research support, N.I.H., extramural; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
29609137	10.1016/j.cyto.2018.03.020	pubmed.ncbi.nlm.nih.gov/29609137/	Cytokine-mediated therapeutic resistance in breast cancer	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
29219189	10.1002/jcp.26379	pubmed.ncbi.nlm.nih.gov/29219189/	Breast cancer diagnosis: Imaging techniques and biochemical markers	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
29143228	10.1007/s12094-017-1805-0	pubmed.ncbi.nlm.nih.gov/29143228/	Effect of exosome biomarkers for diagnosis and prognosis of breast cancer patients	Journal article; systematic review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
29746865	10.1016/j.bbrc.2018.05.018	pubmed.ncbi.nlm.nih.gov/29746865/	miR-130a-3p inhibits migration and invasion by regulating RAB5B in human breast cancer stem cell-like cells	Journal article; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	EV-miRNA biology, target regulation or profiling without the focused cytotoxic-response or EV-loaded miRNA therapeutic-delivery endpoint
29907766	10.1038/s41467-018-04791-8	pubmed.ncbi.nlm.nih.gov/29907766/	Efficient RNA drug delivery using red blood cell extracellular vesicles	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated therapeutic small-RNA/miRNA delivery includes breast cancer models; no clinical validation inferred
29620157	10.3892/ijo.2018.4336	pubmed.ncbi.nlm.nih.gov/29620157/	Glucocorticoid receptor overexpression slightly shifts microRNA expression patterns in triple-negative breast cancer	Journal article	Title and abstract	C	Outside focused primary candidate set	EV-miRNA biology, target regulation or profiling without the focused cytotoxic-response or EV-loaded miRNA therapeutic-delivery endpoint
29881714	10.3389/fonc.2018.00161	pubmed.ncbi.nlm.nih.gov/29881714/	Mechanisms and therapy for cancer metastasis to the brain	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
30003739		pubmed.ncbi.nlm.nih.gov/30003739/	A miRNAs profile evolution of triple negative breast cancer cells in the presence of a possible adjuvant therapy and senescence inducer	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or profiles with cytotoxic treatment/drug response; mechanism and recipient model require full-text appraisal
29713834	10.1208/s12248-018-0227-4	pubmed.ncbi.nlm.nih.gov/29713834/	The phenotypic effects of exosomes secreted from distinct cellular sources: A comparative study based on miRNA composition	Comparative study; journal article; research support, N.I.H., extramural	Title and abstract	C	Outside focused primary candidate set	Comparative EV intrinsic biological activity; not a focused cytotoxic-response or engineered miRNA-delivery intervention
29367765	10.1038/s41388-017-0116-9	pubmed.ncbi.nlm.nih.gov/29367765/	Employing mesenchymal stem cells to support tumor-targeted delivery of extracellular vesicle (EV)-encapsulated microRNA-379	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated therapeutic small-RNA/miRNA delivery includes breast cancer models; no clinical validation inferred
29593419	10.2147/OTT.S152462	pubmed.ncbi.nlm.nih.gov/29593419/	Functional miRNAs in breast cancer drug resistance	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
29872722	10.1038/s41698-018-0047-0	pubmed.ncbi.nlm.nih.gov/29872722/	Organotropism: New insights into molecular mechanisms of breast cancer metastasis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
29151358	10.2217/bmm-2017-0305	pubmed.ncbi.nlm.nih.gov/29151358/	Exosomal microRNA: A novel biomarker for breast cancer	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
29339789	10.1038/s41598-018-19339-5	pubmed.ncbi.nlm.nih.gov/29339789/	Exosome-mediated breast cancer chemoresistance via miR-155 transfer	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or profiles with cytotoxic treatment/drug response; mechanism and recipient model require full-text appraisal
29323124	10.1038/s41419-017-0030-7	pubmed.ncbi.nlm.nih.gov/29323124/	miR-770 suppresses the chemo-resistance and metastasis of triple negative breast cancer via direct targeting of STMN1	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or profiles with cytotoxic treatment/drug response; mechanism and recipient model require full-text appraisal
30381647	10.1248/yakushi.18-00145	pubmed.ncbi.nlm.nih.gov/30381647/	Epigenetic regulation of pharmacokinetic-related genes in human tissues	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
30076721	10.1002/jcp.26856	pubmed.ncbi.nlm.nih.gov/30076721/	miR-214 is an important regulator of the musculoskeletal metabolism and disease	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
29275360	10.21873/cgp.20062	pubmed.ncbi.nlm.nih.gov/29275360/	The role of microRNAs in breast cancer metastasis: Preclinical validation and potential therapeutic targets	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
29230043	10.1038/s41565-017-0012-z	pubmed.ncbi.nlm.nih.gov/29230043/	Nanoparticle orientation to control RNA loading and ligand display on extracellular vesicles for cancer regression	Journal article; research support, N.I.H., extramural	Title and abstract	C	Outside focused primary candidate set	Therapeutic breast-cancer EV payload tested in the abstract is siRNA; different small-RNA class from miRNA/anti-miRNA
28163101	10.1016/j.mce.2017.02.004	pubmed.ncbi.nlm.nih.gov/28163101/	Identification of miRNAs as biomarkers for acquired endocrine resistance in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
28974015	10.3390/cancers9100134	pubmed.ncbi.nlm.nih.gov/28974015/	The epithelial-to-mesenchymal transition in breast cancer: Focus on basal-like carcinomas	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
28694015	10.1016/j.breast.2017.06.024	pubmed.ncbi.nlm.nih.gov/28694015/	Predicting treatment resistance and relapse through circulating DNA	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
28672799	10.3390/cancers9070071	pubmed.ncbi.nlm.nih.gov/28672799/	Exosomal microRNAs in breast cancer towards diagnostic and therapeutic applications	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
28202520	10.1158/0008-5472.CAN-16-2129	pubmed.ncbi.nlm.nih.gov/28202520/	Evolution of cancer stem-like cells in endocrine-resistant metastatic breast cancers is mediated by stromal microvesicles	Journal article	Title and abstract	C	Outside focused primary candidate set	Endocrine/hormonal resistance; outside focused cytotoxic treatment-response criteria
28435471	10.7150/thno.16532	pubmed.ncbi.nlm.nih.gov/28435471/	Nucleolin-targeted extracellular vesicles as a versatile platform for biologics delivery to breast cancer	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated therapeutic small-RNA/miRNA delivery includes breast cancer models; no clinical validation inferred
27345402	10.1038/onc.2016.229	pubmed.ncbi.nlm.nih.gov/27345402/	Exosomes miR-126a released from MDSC induced by DOX treatment promotes lung metastasis	Journal article; research support, N.I.H., extramural; research support, non-U.S. government; research support, U.S. government, non-P.H.S.	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or profiles with cytotoxic treatment/drug response; mechanism and recipient model require full-text appraisal
29216623	10.1159/000485780	pubmed.ncbi.nlm.nih.gov/29216623/	Exosomal microRNA miR-1246 promotes cell proliferation, invasion and drug resistance by targeting CCNG2 in breast cancer	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or profiles with cytotoxic treatment/drug response; mechanism and recipient model require full-text appraisal

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
28683441	10.1159/000478019	pubmed.ncbi.nlm.nih.gov/28683441/	Clinical relevance of circulating, cell-free and exosomal microRNAs in plasma and serum of breast cancer patients	Journal article	Title and abstract	R	Outside focused primary candidate set	Abstract explicitly identifies this as a review, despite generic journal article indexing; not original primary evidence
27822407		pubmed.ncbi.nlm.nih.gov/27822407/	Exosomes-mediate microRNAs transfer in breast cancer chemoresistance regulation	Review; journal article	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
27569215	10.1158/0008-5472.CAN-16-1092	pubmed.ncbi.nlm.nih.gov/27569215/	Mesenchymal stem cell-derived exosomes stimulate cycling quiescence and early breast cancer dormancy in bone marrow	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or profiles with cytotoxic treatment/drug response; mechanism and recipient model require full-text appraisal
26582656	10.1016/j.canlet.2015.11.016	pubmed.ncbi.nlm.nih.gov/26582656/	Non-coding RNA as mediators in microenvironment-breast cancer cell communication	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
27800035	10.1007/s12195-016-0457-4	pubmed.ncbi.nlm.nih.gov/27800035/	Oncogene knockdown via active loading of small RNAs into extracellular vesicles by sonication	Journal article	Title and abstract	C	Outside focused primary candidate set	Therapeutic breast-cancer EV payload tested in the abstract is siRNA; different small-RNA class from miRNA/anti-miRNA

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
27571936	10.1038/srep32299	pubmed.ncbi.nlm.nih.gov/27571936/	Circulating intestine-derived exosomal miR-328 in plasma, a possible biomarker for estimating BCRP function in the human intestines	Clinical trial; journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies another disease/cancer or treatment-toxicity/repair endpoint rather than breast-tumor response or therapeutic EV-miRNA delivery
27515302	10.1186/s13058-016-0740-2	pubmed.ncbi.nlm.nih.gov/27515302/	Tumor-associated stromal cells as key contributors to the tumor microenvironment	Journal article; review; research support, N.I.H., extramural	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
27468688	10.1038/cddis.2016.224	pubmed.ncbi.nlm.nih.gov/27468688/	Exosome-mediated delivery of miR-9 induces cancer-associated fibroblast-like properties in human breast fibroblasts	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
27184014	10.3803/EnM.2016.31.2.206	pubmed.ncbi.nlm.nih.gov/27184014/	Dissecting tumor-stromal interactions in breast cancer bone metastasis	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
26910922	10.18632/oncotarget.7481	pubmed.ncbi.nlm.nih.gov/26910922/	MicroRNA expression profiles of drug-resistance breast cancer cells and their exosomes	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original study associates EV-associated miRNA or profiles with cytotoxic treatment/drug response; mechanism and recipient model require full-text appraisal

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
26555545	10.1007/s13277-015-4402-2	pubmed.ncbi.nlm.nih.gov/26555545/	Exosomes decrease sensitivity of breast cancer cells to adriamycin by delivering microRNAs	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-miRNA study includes cytotoxic chemotherapy exposure, drug response or dormancy; mixed evidence strength requires full-text appraisal
26797784	10.1007/s13277-015-4683-5	pubmed.ncbi.nlm.nih.gov/26797784/	Extracellular vesicles in breast cancer drug resistance and their clinical application	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
26432333	10.1007/s13277-015-4161-0	pubmed.ncbi.nlm.nih.gov/26432333/	Exosomes from adriamycin-resistant breast cancer cells transmit drug resistance partly by delivering miR-222	Journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-miRNA study includes cytotoxic chemotherapy exposure, drug response or dormancy; mixed evidence strength requires full-text appraisal
26794868	10.1038/cr.2016.13	pubmed.ncbi.nlm.nih.gov/26794868/	Cross-kingdom inhibition of breast cancer growth by plant miR159	Journal article; research support, N.I.H., extramural; research support, non-U.S. government	Title and abstract	C	Outside focused primary candidate set	Plant-miRNA EV detection and oral synthetic-mimic intervention are distinct; the abstract does not test EV-mediated therapeutic delivery
26848301	10.5114/pm.2015.56540	pubmed.ncbi.nlm.nih.gov/26848301/	Microvesicles as a potential biomarker of neoplastic diseases and their role in development and progression of neoplasm	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
26416415	10.18632/oncotarget.5192	pubmed.ncbi.nlm.nih.gov/26416415/	miR-134 in extracellular vesicles reduces triple-negative breast cancer aggression and increases drug sensitivity	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated miRNA delivery is experimentally evaluated in breast cancer models; EV-mediated sensitization must be distinguished from direct cellular transfection
25907045	10.1016/j.biomaterials.2015.03.014	pubmed.ncbi.nlm.nih.gov/25907045/	*In situ* single step detection of exosome microRNA using molecular beacon	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies diagnostic/profiling/analytical or knowledge-mapping work without a focused chemotherapy-response or miRNA therapeutic-delivery endpoint
25860935	10.18632/oncotarget.3520	pubmed.ncbi.nlm.nih.gov/25860935/	Endothelial exosomes contribute to the antitumor response during breast cancer neoadjuvant chemotherapy via microRNA transfer	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-miRNA study includes cytotoxic chemotherapy exposure, drug response or dormancy; mixed evidence strength requires full-text appraisal
25860815	10.3390/cancers7020598	pubmed.ncbi.nlm.nih.gov/25860815/	The roles of microRNAs in breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
25828099	10.1038/ncomms7716	pubmed.ncbi.nlm.nih.gov/25828099/	Brain metastatic cancer cells release microRNA-181c-containing extracellular vesicles capable of destructing blood-brain barrier	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
25773694		pubmed.ncbi.nlm.nih.gov/25773694/	Influence of microvesicles in breast cancer metastasis and their therapeutic implications	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
26279432	10.1159/000430191	pubmed.ncbi.nlm.nih.gov/26279432/	β-elemene reverses chemoresistance of breast cancer cells by reducing resistance transmission via exosomes	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-miRNA study includes cytotoxic chemotherapy exposure, drug response or dormancy; mixed evidence strength requires full-text appraisal
26130410	10.1007/s10911-015-9332-5	pubmed.ncbi.nlm.nih.gov/26130410/	Exosomes derived from breast cancer cells, small trojan horses?	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
25401465	10.1172/JCI79191	pubmed.ncbi.nlm.nih.gov/25401465/	Special delivery: microRNA-200-containing extracellular vesicles provide metastatic message to distal tumor cells	Journal article; comment	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
25428807	10.1186/1476-4598-13-256	pubmed.ncbi.nlm.nih.gov/25428807/	Exosome-mediated transfer of miR-10b promotes cell invasion in breast cancer	Journal article; research support, N.I.H., extramural; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
25426255	10.4252/wjsc.v6.i5.591	pubmed.ncbi.nlm.nih.gov/25426255/	Roles of microRNA-140 in stem cell-associated early stage breast cancer	Journal article; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
24969560	10.1007/s13277-014-2242-0	pubmed.ncbi.nlm.nih.gov/24969560/	Exosomes from docetaxel-resistant breast cancer cells alter chemosensitivity by delivering microRNAs	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-miRNA study includes cytotoxic chemotherapy exposure, drug response or dormancy; mixed evidence strength requires full-text appraisal
25007959	10.1007/s10549-014-3037-0	pubmed.ncbi.nlm.nih.gov/25007959/	Exosomal miR-221/222 enhances tamoxifen resistance in recipient ER-positive breast cancer cells	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title identifies endocrine, HER2/CDK4/6-targeted, checkpoint-inhibitor or radiation context, outside focused cytotoxic-response criteria
24985346	10.1126/scisignal.2005231	pubmed.ncbi.nlm.nih.gov/24985346/	Exosomes from bone marrow mesenchymal stem cells contain a microRNA that promotes dormancy in metastatic breast cancer cells	Clinical trial; journal article	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-miRNA study includes cytotoxic chemotherapy exposure, drug response or dormancy; mixed evidence strength requires full-text appraisal
24740415	10.1371/journal.pone.0095240	pubmed.ncbi.nlm.nih.gov/24740415/	Exosomes from drug-resistant breast cancer cells transmit chemoresistance by a horizontal transfer of microRNAs	Journal article; research support, non-U.S. government	Title and abstract	F	Relevant candidate; full-text appraisal separate	Original EV-miRNA study includes cytotoxic chemotherapy exposure, drug response or dormancy; mixed evidence strength requires full-text appraisal

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
24272085	10.1007/s13277-013-1417-4	pubmed.ncbi.nlm.nih.gov/24272085/	MicroRNAs delivered by extracellular vesicles: An emerging resistance mechanism for breast cancer	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
23839094	10.3390/ijms140714240	pubmed.ncbi.nlm.nih.gov/23839094/	Intercellular communication by exosome-derived microRNAs in cancer	Journal article; research support, N.I.H., extramural; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
23487440	10.1093/jjco/hyt037	pubmed.ncbi.nlm.nih.gov/23487440/	MicroRNAs in Cancer: The 22nd Hiroshima Cancer Seminar/the 4th Japanese Association for RNA Interference Joint International Symposium, 30 August 2012, Grand Prince Hotel Hiroshima	Conference proceedings	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
23032975	10.1038/mt.2012.180	pubmed.ncbi.nlm.nih.gov/23032975/	Systemically injected exosomes targeted to EGFR deliver antitumor microRNA to breast cancer cells	Journal article; research support, non-U.S. government	Title and abstract	T	Relevant candidate; full-text appraisal separate	EV-mediated miRNA delivery is experimentally evaluated in breast cancer models; EV-mediated sensitization must be distinguished from direct cellular transfection

PMID	DOI	PubMed database URL	Title	Publication type	Assessment stage	Category	Screening decision	Reason for the decision
22418571	10.1097/MOL.0b013e328350a425	pubmed.ncbi.nlm.nih.gov/22418571/	Lipid-based carriers of microRNAs and intercellular communication	Journal article; research support, N.I.H., intramural; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set
21939504	10.1186/1476-4598-10-117	pubmed.ncbi.nlm.nih.gov/21939504/	Microvesicles secreted by macrophages shuttle invasion-potentiating microRNAs into breast cancer cells	Journal article; research support, non-U.S. government	Title and publication metadata	C	Outside focused primary candidate set	Title addresses natural EV/miRNA biology, progression, stromal communication or metastasis, without a focused cytotoxic-response or therapeutic miRNA-loading endpoint
21059829	10.1373/clinchem.2010.150730	pubmed.ncbi.nlm.nih.gov/21059829/	Intracellular and extracellular microRNAs in breast cancer	Journal article; research support, non-U.S. government; review	Title and publication metadata	R	Outside focused primary candidate set	Indexed non-primary publication (review, synthesis, commentary or proceedings); may inform context, not the focused primary candidate set

Table SI lists the 443 retrieved records and the screening decisions of the authors; screening was not independently duplicated; candidate status indicates topical relevance rather than completed full-text appraisal. PMID, PubMed identifier; DOI, digital object identifier; EV, extracellular vesicle; miRNA/miR, microRNA; N.I.H., National Institutes of Health; P.H.S., Public Health Service; F, treatment-associated EV-miRNA or drug-response investigation; B, patient treatment-response biomarker; T, EV-based miRNA delivery; C, outside the focused primary question; R, non-primary report; N, correction/retraction notice; P, preprint; RET, indexed retracted publication. For correction and retraction notices, the Title field names the associated original study, whereas the PMID and DOI identify the notice. For the collective notice, one EV-related example is shown; the notice covers 20 articles.

Table SII. Summary of the supplementary PubMed search and screening.

Stage/set	Records, n
Retrieved/unique PubMed database identifiers	443/443
Duplicate PMID records removed	0
Titles screened	443
Abstracts assessed	164
Title/metadata-only triage	279
Relevant candidates (treatment findings/patient biomarkers/delivery)	103 (47/9/47)
Other records (non-primary/notices/preprints/retracted/outside focused question)	340 (171/7/5/5/152)
Manuscript bibliography	68 references
Bibliography matching query by DOI	30 references; 20 in focused candidate set

Counts describe bibliographic records, not experiments or evidence grades. Candidate status indicates topical relevance rather than completed full-text appraisal. PMID, PubMed identifier; DOI, digital object identifier.