

Supplementary methods

Immunohistochemistry. Positive expression of Ki67 in eye tissues was evaluated by immunohistochemical staining. Isolated tissues were placed in 4% paraformaldehyde and fixed for 12 h, followed by dehydration and embedding in paraffin. These tissue-contained wax blocks were then prepared into sections with 4 μ m thickness. After antigen retrieval in citrate, the sections were incubated with protein blocking buffer (pH 7.5) (cat. no. ab126587; Abcam) for 1 h at room temperature. The samples were then incubated with specific primary antibody (cat. no. ab21700; 1:200 dilution; Abcam) at 4°C overnight, followed by incubation with HRP-labelled anti-rabbit antibody (cat. no. A0208; 1:50 dilution; Beyotime Institute of Biotechnology) for 60 min at 37°C. Later, the slices were intervened with a DAB substrate kit (cat. no. ab64238; Abcam) for 10 min and the nuclei were stained with hematoxylin for another 4 min at room temperature. The images were acquired using the Olympus BX43

microscope and DP73 camera (Olympus Corp.). Because the presence of melanin affects identification, cells with Ki67-positive expression were manually counted instead of using a computer software.

Genes. Genes detected by high-throughput sequencing include ATM, ATR, ATRX, BAP1, BARD1, BLM, BRCA1, BRCA2, BRIP1, CDH1, CDK12, CDKN2A, CFTR, CHEK1, CHEK2, DMC1, EME1, EME2, EPCAM, ERCC2, ERCC4, ERCC5, FAM175A, FANCA, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, GEN1, HOXB13, MLH1, MRE11A, MSH2, MSH6, MUS81, MUTYH, NBN, NF1, PALB2, PMS1, PMS2, POLE, PPP2R2A, PRSS1, PTEN, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAD52, RAD54B, RAD54L, RBBP8, SLX1A, SLX4, SMARCA4, SPINK1, STK11, TP53, TP53BP1, WRN, XRCC2 and XRCC3. The detection range covers somatic gene exons and their adjacent ± 2 bp intronic regions, as well as germline gene exons and their adjacent ± 20 bp intronic regions.

Figure S1. Ultrasound images showing the absence of metastasis. Ultrasound images of the (A) liver, (B) gallbladder, (C) kidney, (D) bladder and prostate, (E) thyroid and (F) neck vasculature.

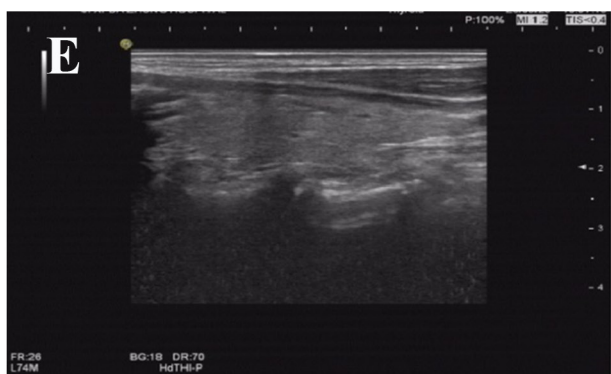
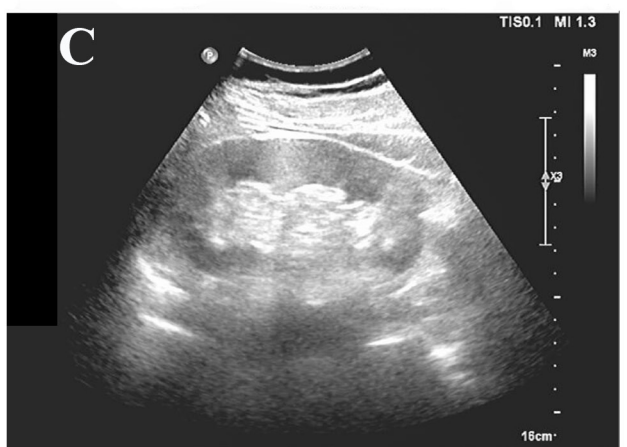


Figure S2. Brain magnetic resonance images. (A) Coronal scan shows no metastasis in the brain. (B) Parallel scan shows right uveal melanoma and the absence of metastasis in the brain. HPR, head direction; RFA, right; LHP, left; FAL, foot direction; AHR, anterior; PFL, posterior.

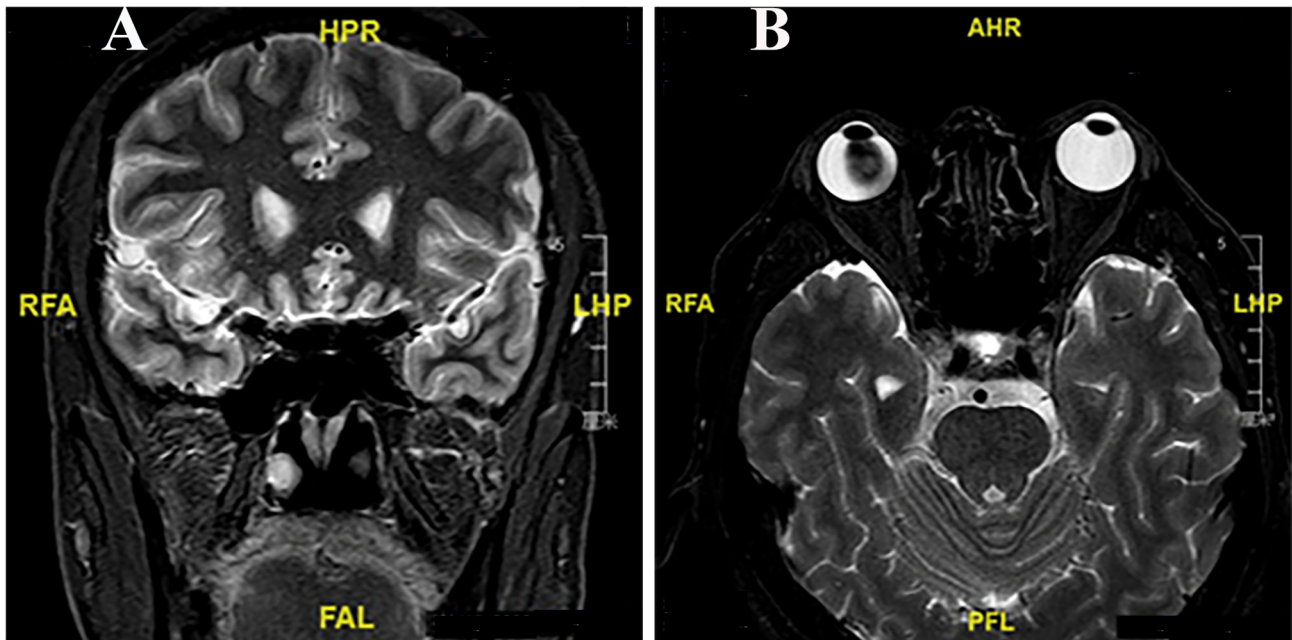


Figure S3. Positron emission tomography/CT images showing the absence of metastasis. Images of the (A) brain, (B) lung, (C) abdomen, (D) spine and legs.

