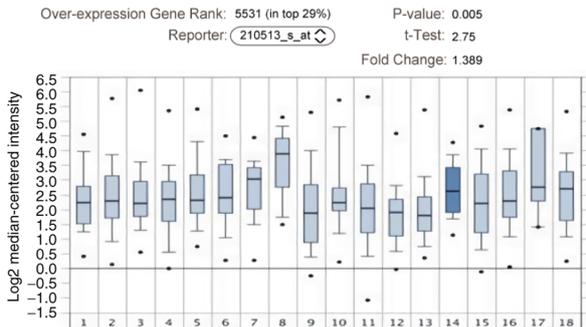


Figure S1. Expression of VEGF in the Oncomine database. (A-C) Expression of vascular endothelial growth factor (VEGF) in 3 datasets (Barretina CellLine, Garnett CellLine, and Wooster CellLine) from the Oncomine database. (D) Meta-analysis of the 3 Oncomine datasets on the VEGF expression difference between MM and other types of cancer. MM, multiple myeloma..

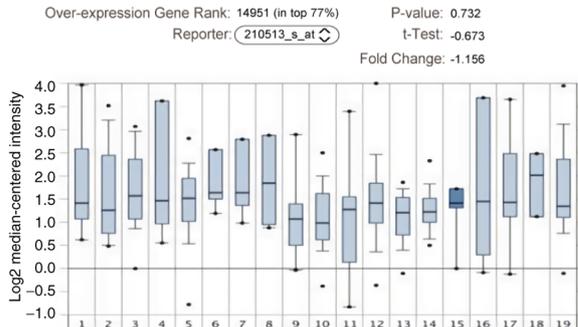
A Barretina CellLine statistics



Legend

- | | |
|------------------------------|----------------------------|
| 1. Bladder cancer (21) | 10. Bladder cancer (29) |
| 2. Brain and CNS cancer (64) | 11. Lung cancer (166) |
| 3. Breast cancer (56) | 12. Lymphoma (61) |
| 4. Colorectal cancer (56) | 13. Melanoma (57) |
| 5. Esophageal cancer (25) | 14. Myeloma (26) |
| 6. Gastric cancer (35) | 15. Ovarian cancer (44) |
| 7. Head and Neck cancer (41) | 16. Pancreatic cancer (44) |
| 8. Kidney cancer (21) | 17. Prostate cancer (7) |
| 9. Leukemia (83) | 18. Sarcoma (39) |

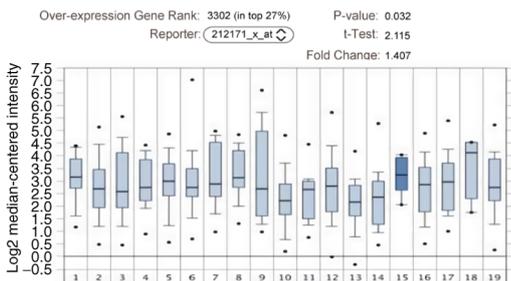
B Wooster CellLine statistics



Legend

- | | |
|------------------------------|---------------------------|
| 1. Bladder cancer (9) | 11. Bladder cancer (9) |
| 2. Brain and CNS cancer (16) | 12. Lung cancer (73) |
| 3. Breast cancer (19) | 13. Lymphoma (38) |
| 4. Cervical cancer (7) | 14. Melanoma (12) |
| 5. Colorectal cancer (23) | 15. Myeloma (5) |
| 6. Esophageal cancer (4) | 16. Ovarian cancer (5) |
| 7. Gastric cancer (5) | 17. Pancreatic cancer (9) |
| 8. Head and Neck cancer (6) | 18. Prostate cancer (3) |
| 9. Kidney cancer (8) | 19. Sarcoma (17) |
| 10. Leukemia (30) | |

C Garnett CellLine statistics



Legend

- | | |
|------------------------------|----------------------------|
| 1. Bladder cancer (16) | 11. Bladder cancer (13) |
| 2. Brain and CNS cancer (94) | 12. Lung cancer (130) |
| 3. Breast cancer (39) | 13. Lymphoma (44) |
| 4. Cervical cancer (12) | 14. Melanoma (41) |
| 5. Colorectal cancer (40) | 15. Myeloma (9) |
| 6. Esophageal cancer (23) | 16. Ovarian cancer (22) |
| 7. Gastric cancer (19) | 17. Pancreatic cancer (16) |
| 8. Head and Neck cancer (33) | 18. Prostate cancer (15) |
| 9. Kidney cancer (22) | 19. Sarcoma (46) |
| 10. Leukemia (66) | |

D

Comparison of VEGFA across 3 analyses Over-expression

Median Rank	p-Value	Gene
5531.0	0.005	VEGFA
		1 2 3

Legend

- | | |
|--|---|
| 1. Cancer type: Myeloma
<i>Barretina CellLine, Nature, 2012</i> | 3. Cancer type: Myeloma
<i>Wooster CellLine, Not Published, 2008</i> |
| 2. Cancer type: Myeloma
<i>Garnett CellLine, Nature, 2012</i> | |
- 1 51025 2510 5 1
 % ← → Not measured
- Rank for a gene is the median rank for that gene across each of the analyses.
 p-value for a gene is its p-value for the median-ranked analysis.

Figure S2. (A) Representative image of MVD with anti-CD34 immunostaining in bone marrow tissues of from 22 patients with newly diagnosed multiple myeloma (MM) (scale bar=1 mm). Microvessels are stained brown. (B) Bone marrow MVD in 22 patients with newly diagnosed MM. MM, multiple myeloma; MVD, microvessel density.

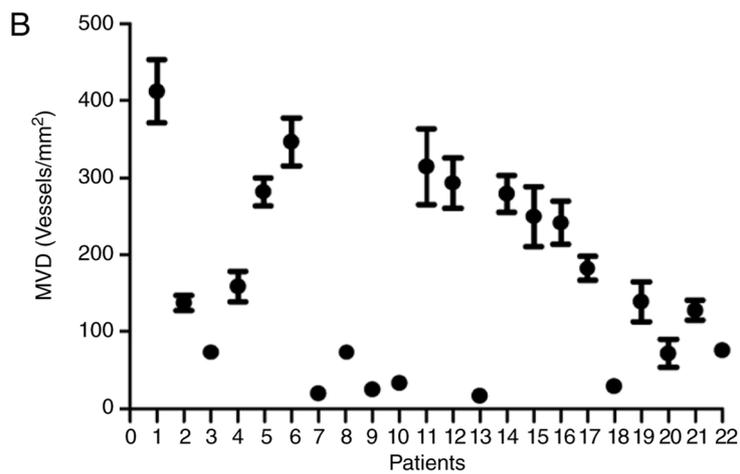
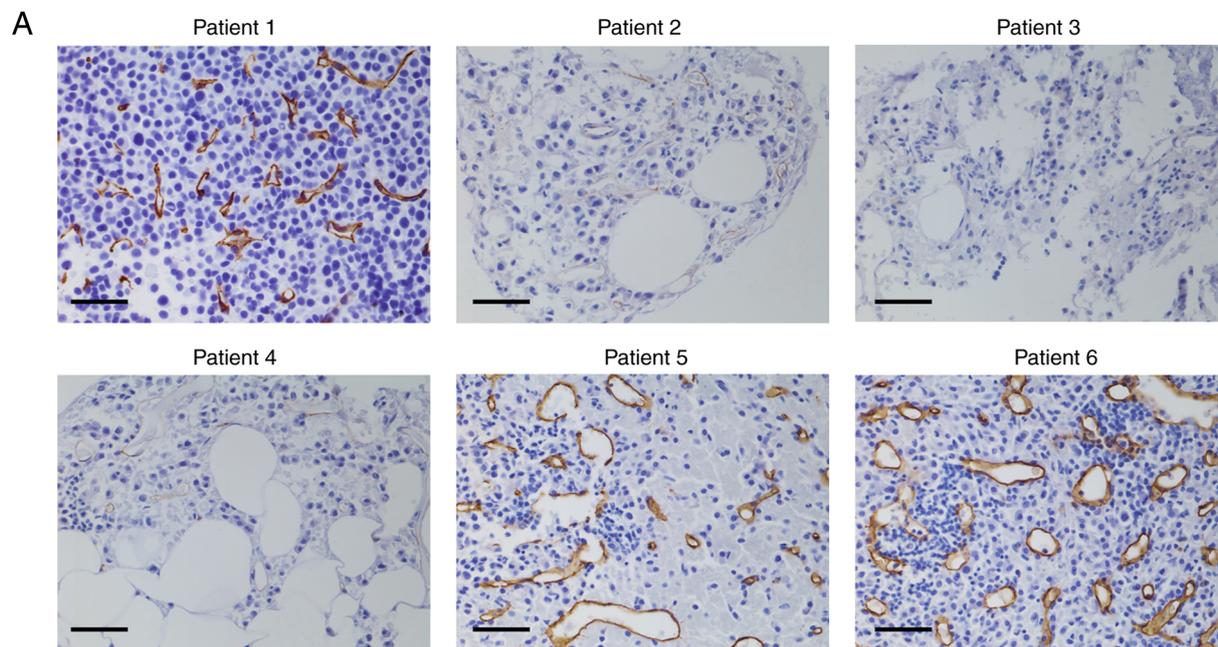


Figure S3. CRISPR/Cas9-mediated efficient DEPTOR disruption in multiple myeloma (MM) cells. RPMI8226 cells were transfected with lentivirus GFP, DEP1, DEP2 or DEP3. (A) Bright-field and fluorescence microscopy images of the cells. Strong EGFP expression could be observed in the cells transfected with lentiviruses GFP, DEP1, DEP2 and DEP3 (scale bar, 10 μ m). (B) Western blot analysis of DEPTOR protein expression in cells transduced with lentiviral GFP, DEP1, DEP2 and DEP3. (C) Enzymatic electrophoresis of 3 target sites determined using the Cruiser™ Enzyme. Upper panel presents images of agarose gels demonstrating that the correct fragments of the 3 different DEPTOR target sites relevant to the Control, DEP1, DEP2 and DEP3 were amplified. Bottom panel presents agarose gel image exhibiting the mismatch-associated short fragments in the DEP1, DEP2 and DEP3 lanes, indicating that insertion or deletion mutations (indel) were introduced in the genomes. No such obvious gene editing effect was detected in the Control and GFP lanes. (D) DNA sequence analysis revealed the presence of the indel mutation in cells transfected with lentivirus DEP3. (E and F) DEPTOR disruption significantly inhibited the proliferation of RPMI8226 and MM.1S cells. The error bars indicate the standard deviation for the three independent experiments.

