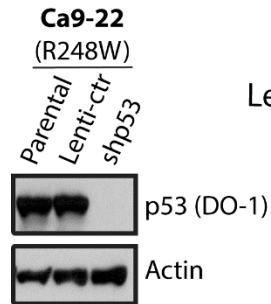


Figure S1: Ingenuity Pathway Analysis of the top signaling pathways in which 91 differentially expressed genes between pBabe and mutp53 G245D UM-SCC-1 cells.

A**B****Ca9-22(R248W)**

Lenti-Ctr

shp53

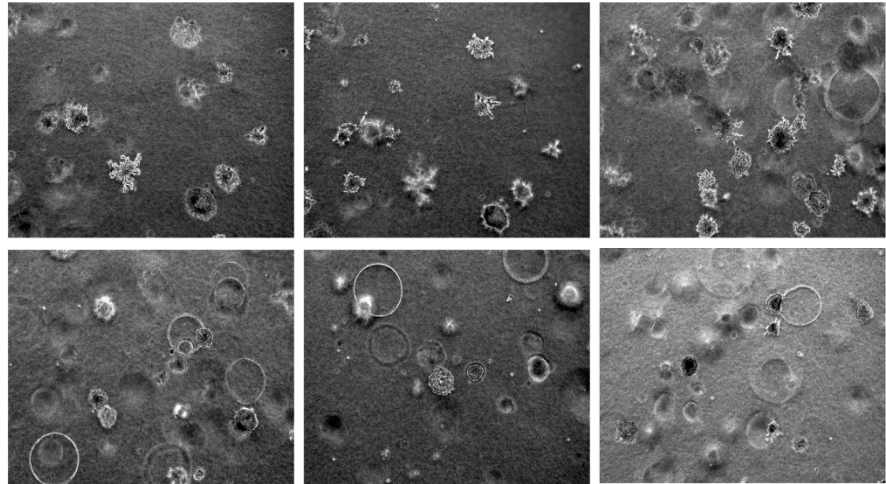
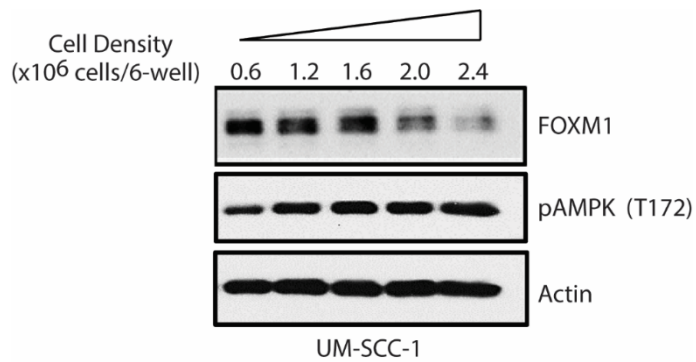
**C**

Figure S2: (A) Western blot of Ca9-22 control and shp53 cell lines. (B) Ca9-22 control and shp53 cell lines 8 days after collagen gel 3D culture. In each group, three representative images were taken. (C) Expression of FOXM1 in a cell-density-dependent manner. Western blot analysis of UM-SCC-1 cells under different cell-density culture conditions in 6-well plates.

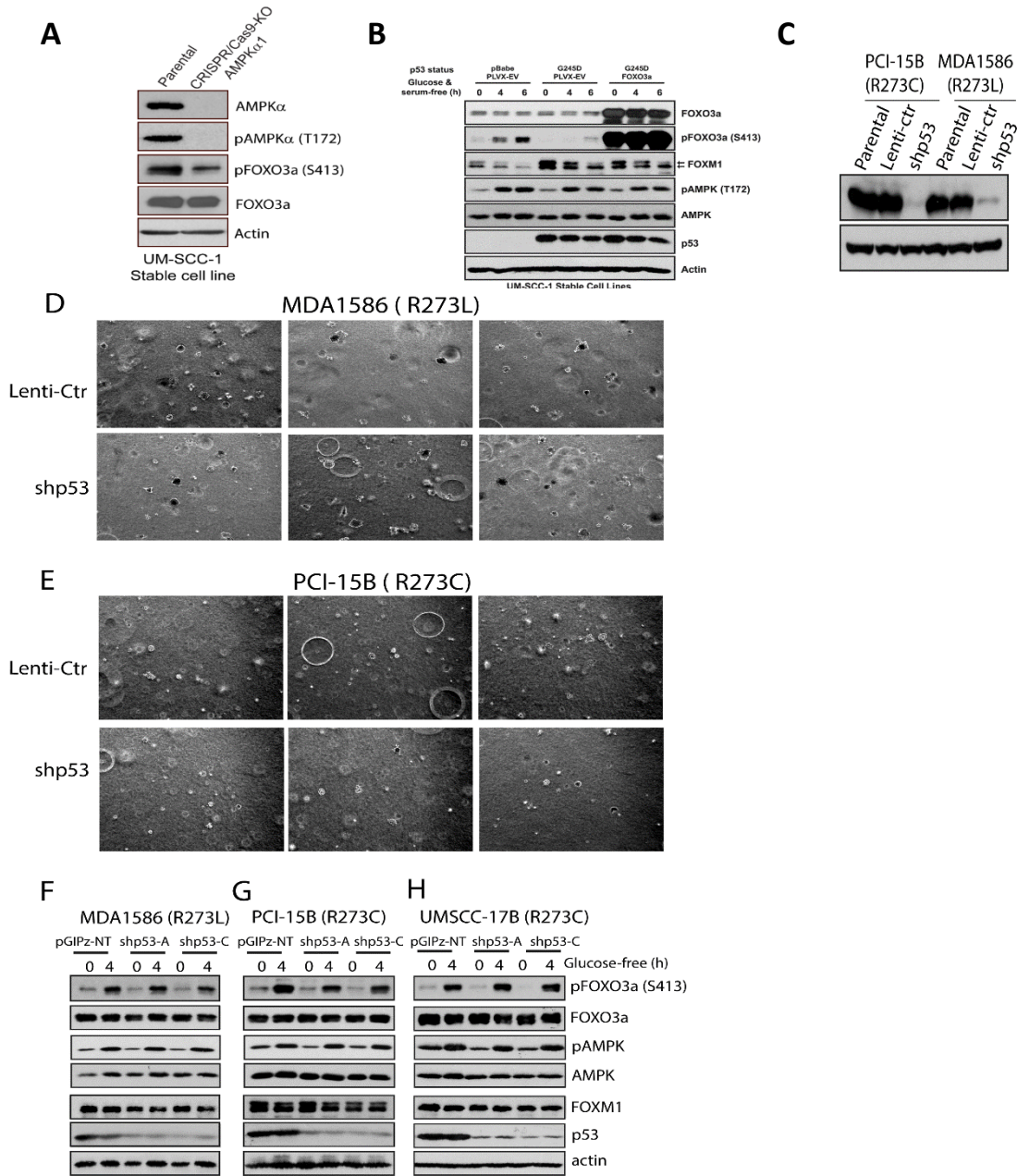


Figure S3: (A-C) (F-H) Western blot analyses of HNSCC stable cell lines. (D-E) MDA1586 and PCI-15B control and shp53 cell lines 8 days after collagen gel 3D culture. In each group, three representative images were taken.

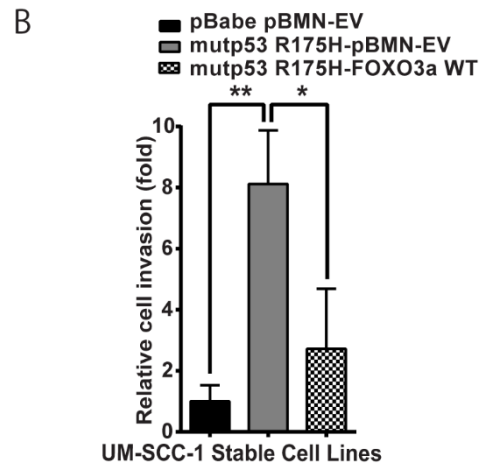
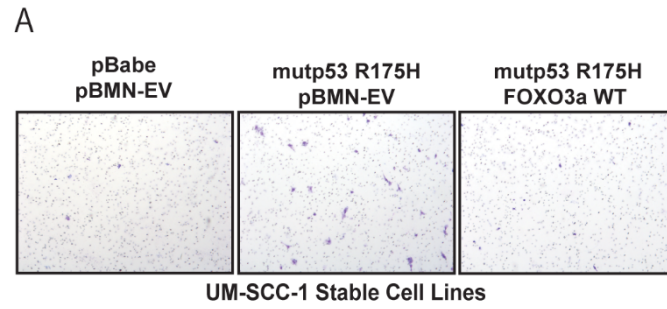


Figure S4: (A) Representative images of Transwell invasion assay of UM-SCC-1 stable cell lines. (B) Quantitation of invasive cells in (A). *, $p < 0.05$; **, $p < 0.01$.

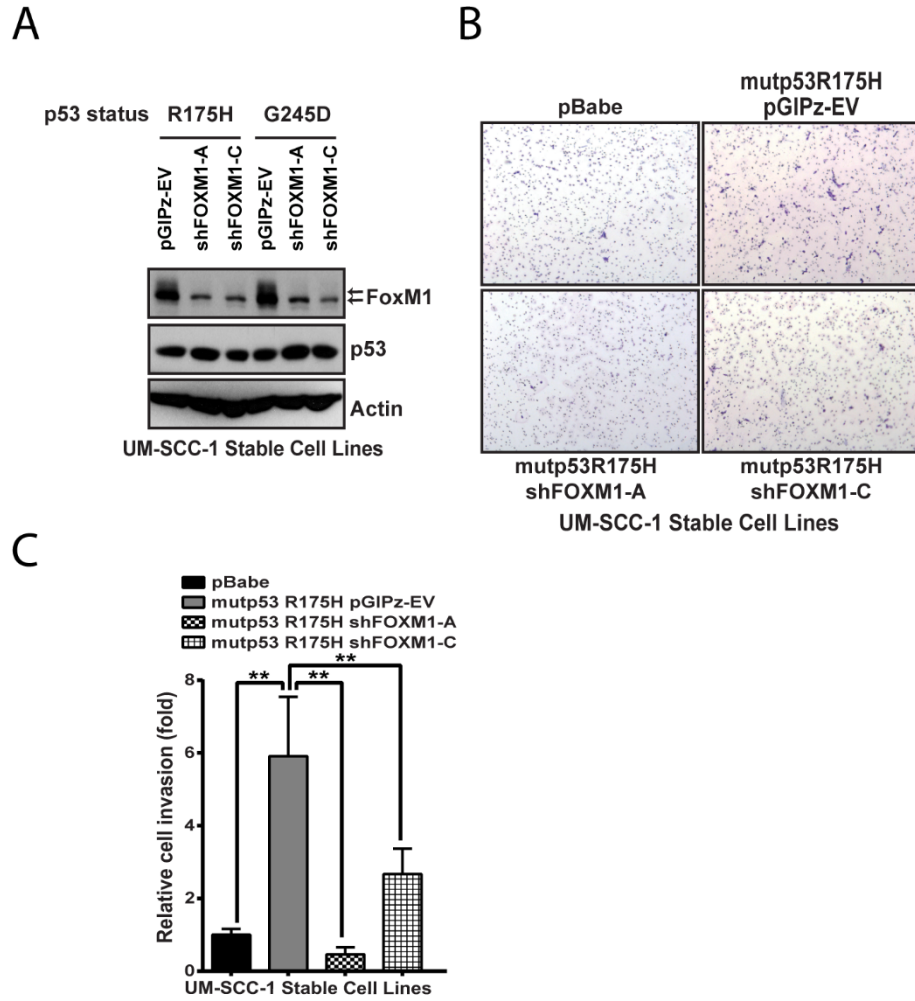


Figure S5: (A) Western blot analysis of isogenic UM-SCC-1 stable cell lines. (B) Representative images of Transwell invasion assay of UM-SCC-1 stable cell lines. (C) Quantitation of invasive cells in (B). **, $p < 0.01$.

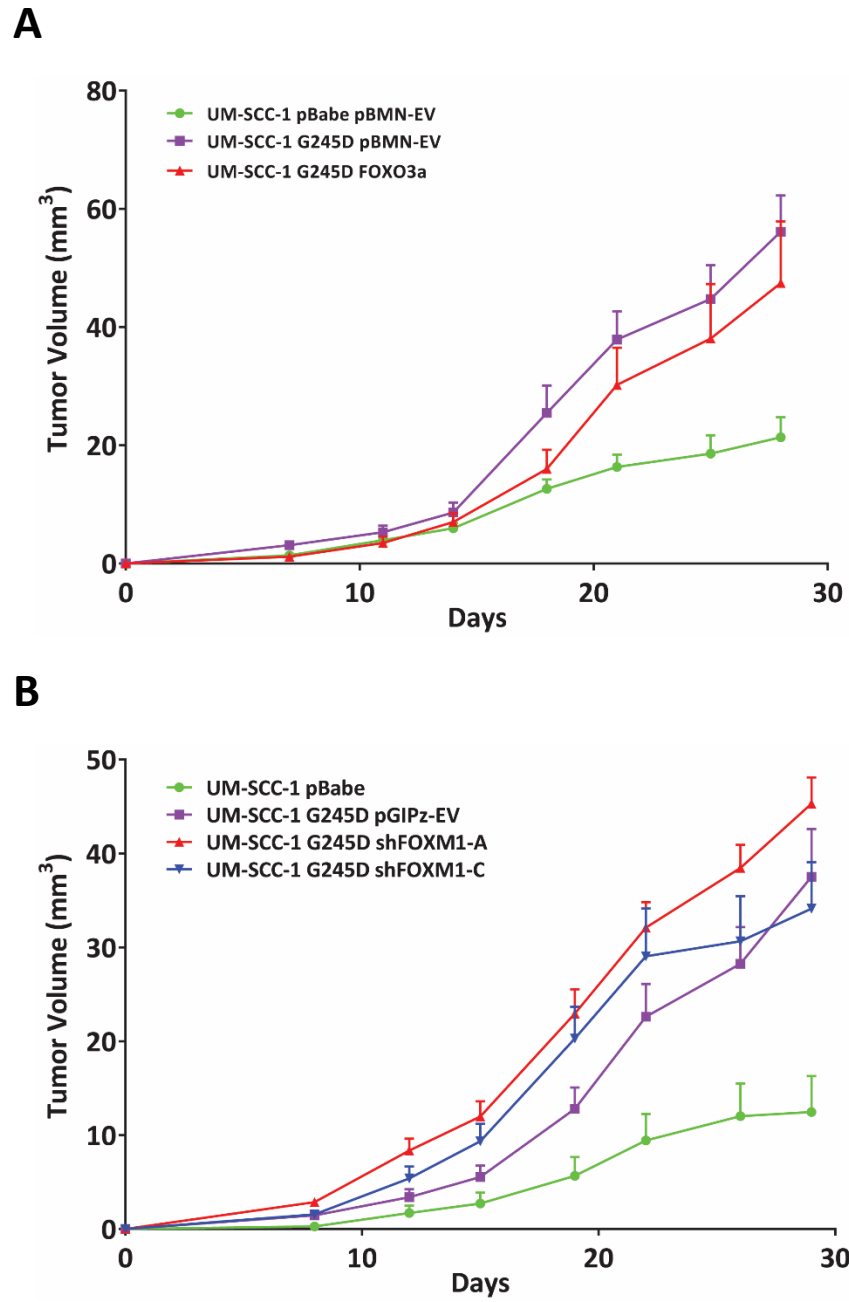
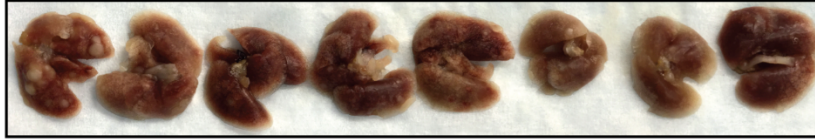


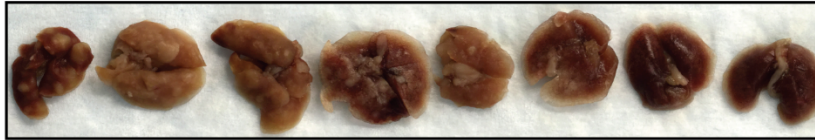
Figure S6: Growth of tumors from UM-SCC-1 stable cell lines injected into the tongues of nude mice.

A

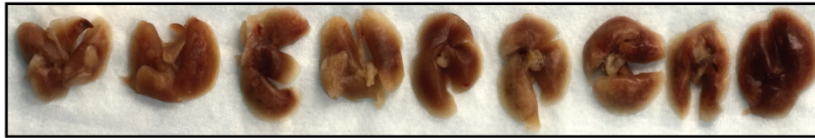
UM-SCC-1 pBabe pBMN-EV



UM-SCC-1 mutp53 G245D pBMN-EV

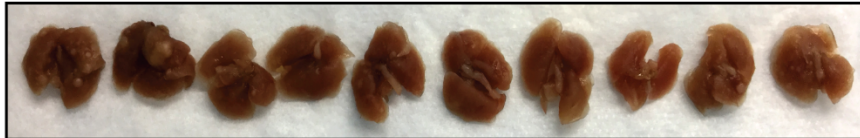


UM-SCC-1 mutp53 G245D FOXO3a

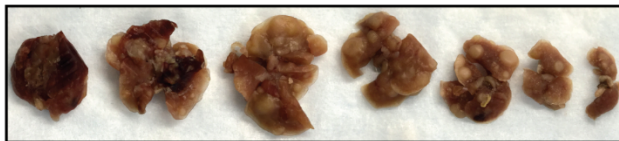


B

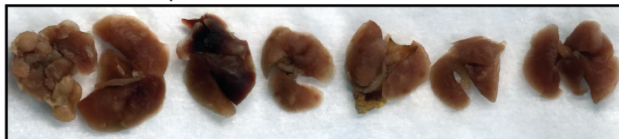
UM-SCC-1 pBabe



UM-SCC-1 mutp53 G245D pGIPz-EV



UM-SCC-1 mutp53 G245D shFOXM1-A



UM-SCC-1 mutp53 G245D shFOXM1-C

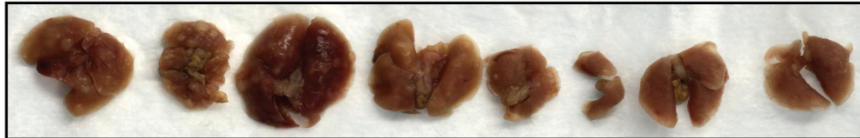


Figure S7: Lungs harvested after injection of tumor cells into the tail veins. (A) Lungs harvested 13 weeks after FOXO3a stable cell line injection; (B) Lungs harvested 14 weeks after shFOXM1 stable cell lines' injection.