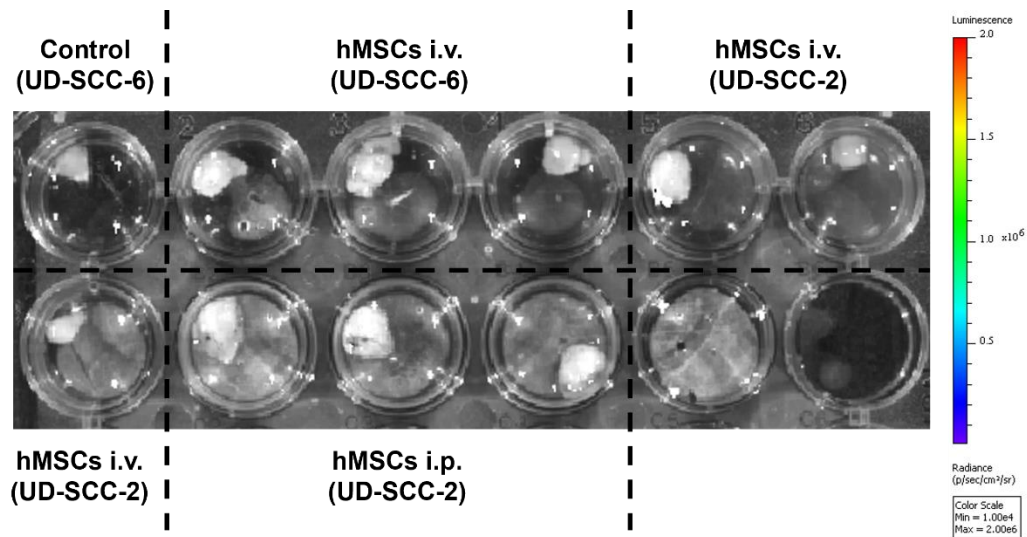


**Supplementary Figure S1** Establishment of a xenograft HNSCC model in NSG mice. **(A+B)** Cell lines derived from HNSCC were seeded into 96-well plates ( $2 \times 10^4$  cells/well). The next day, cells were transduced with the indicated replication-incompetent first generation eGFP-expressing HAdV-5 vector (pMOI 1000). Enhanced GFP expression was analyzed 24 h later by flow cytometry. Results are shown as mean  $\pm$  SD of biological triplicates. **(C+D)**  $2 \times 10^6$  UD-SCC-2 (**C**) or UD-SCC-6 (**D**) cells were injected subcutaneously into the left flank of NSG mice. Tumor volumes were determined daily. Results are shown as mean  $\pm$  standard deviation (UD-SCC-2:  $n = 6$ , UD-SCC-6:  $n = 7$ ). **(E)** 6  $\mu$ m cryosections were stained using a rat  $\alpha$ -mouse CD31 antibody and a secondary Alexa488-labeled goat anti-rat IgG antibody. ChromPure rat IgG was used as isotype control. Cell nuclei were stained with DAPI. A representative staining of a UD-SCC-2 xenograft tumor section is shown excised 39 days post tumor cell injection. Similar results were obtained for UD-SCC-6 xenograft tumor sections.



**Supplementary Figure S2** HNSCC tumors from mice injected with firefly luciferase-expressing hMSCs did not show intratumoral luciferase activity.  $1 \times 10^6$  BM-hMSCs (transduced 3 h before with a firefly luciferase-encoding replication-incompetent first generation HAdV-5 vector pre-incubated with hFX) were injected i.v. or i.p. into tumor-bearing mice after 21 days of tumor growth. Seventy-two hours post-hMSC injection, the mice were sacrificed, and tumors were removed and transferred into PBS. The removed xenograft tumors were analyzed for luciferase activity using the IVIS 200 *in vivo* imaging system. Five minutes before analysis, firefly luciferase substrate was added to the PBS. A representative image from the IVIS 200 system is shown.