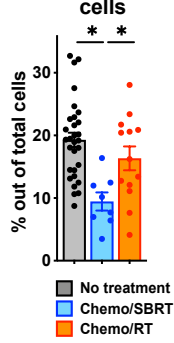
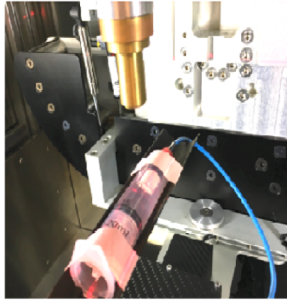


A Human PDAC

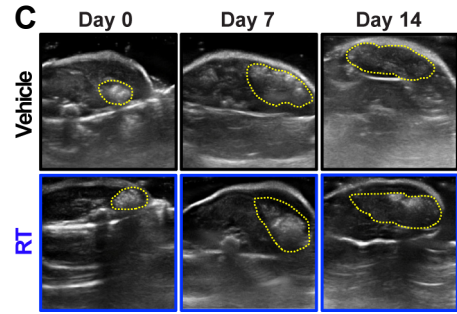
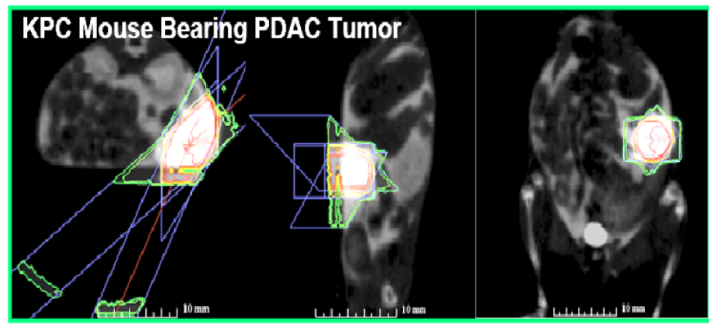
B KPC PDAC GEMM

CK19⁺ tumor cells

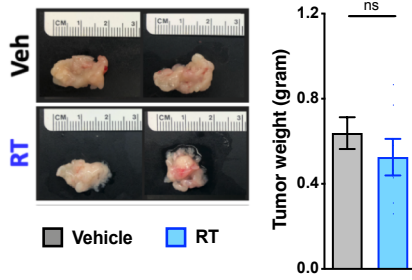
Small Animal Radiation Research Platform (SARRP)



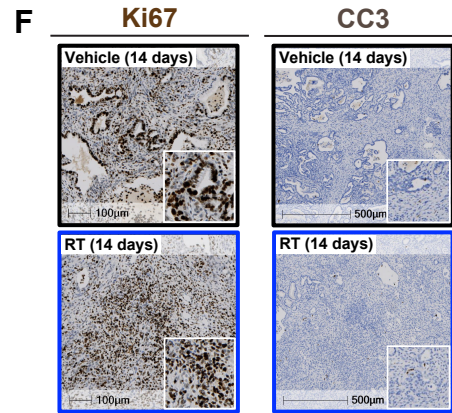
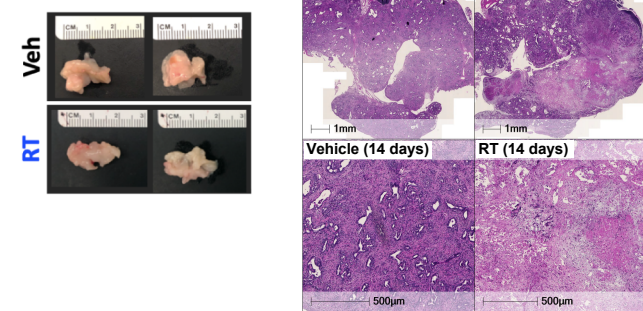
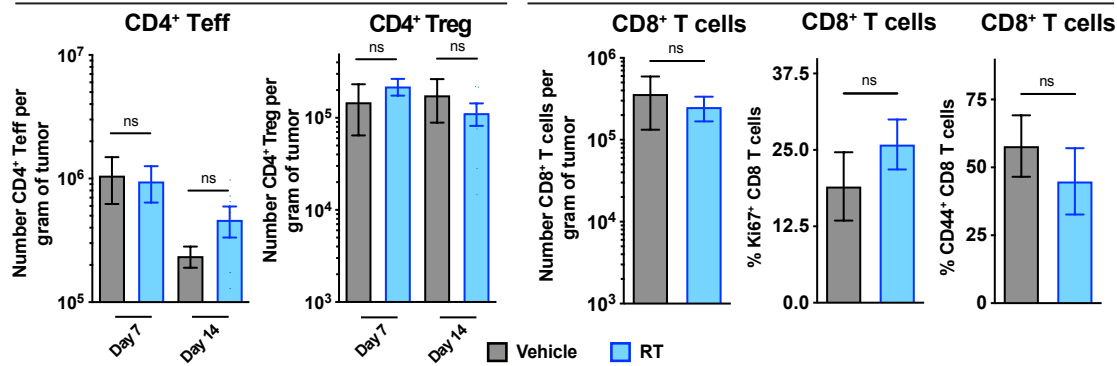
Micro-CT Guided Multi-Beam Radiation Planning



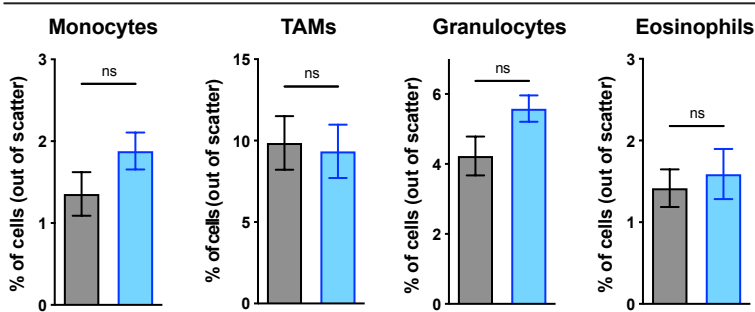
D 7-day treatment KPC Tumor burden



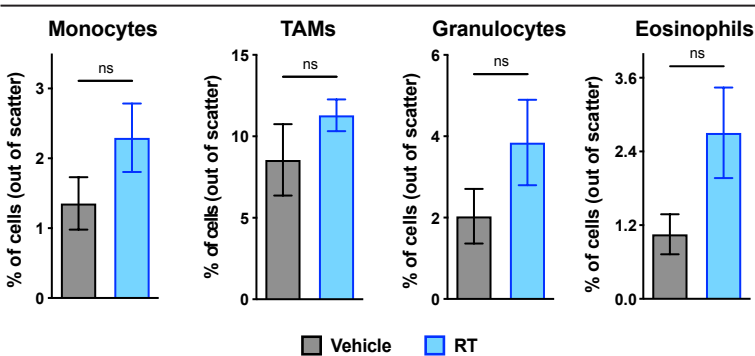
E 14-day treatment KPC

G CD4⁺ T cells Flow Cytometry (Day 7)

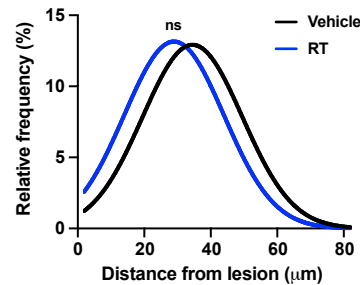
H Flow Cytometry (Day 14)



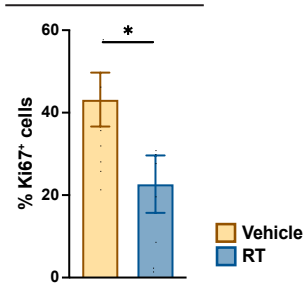
Flow Cytometry (Day 7)



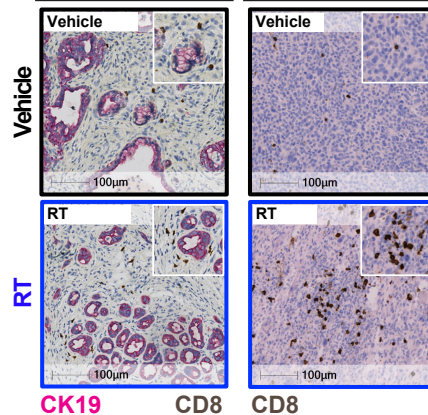
I Frequency distribution



J KPS-OG



K KPC-OG KPS-OG



L Trichrome

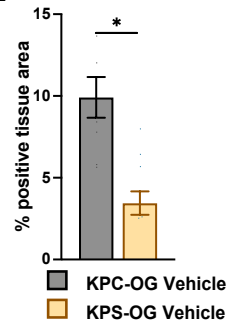


Figure S1: Radiation therapy is insufficient to optimally prime robust T cell responses in PDAC

(A) IHC analysis of CK19⁺ tumor cell number in surgical resection samples from patients who received neoadjuvant Chemo/SBRT, Chemo/RT, or no neoadjuvant therapy. n = 8-32 patients/group. **(B)** Schematic of SARRP machine with CT-guided multi-beam radiation planning utilized for precise RT targeting. **(C)** Representative US images from KPC vehicle or RT-treated mice at days 0, 7, and 14 for tumor growth kinetics in **Fig. 1D**. **(D)** Representative gross tissue images and day 7 pancreas weight from KPC vehicle or RT-treated mice from **Fig. 1C**. n = at least 7 mice/group. **(E)** Representative gross tissue and hematoxylin and eosin (H&E) images from KPC vehicle or RT-treated mice at day 14. **(F)** Representative Ki67 and CC3 IHC images from **Fig. 1H**. **(G)** Flow cytometry quantification of total CD4⁺ T effector and CD4⁺ Foxp3⁺ T regulatory cells in KPC mice at days 7 and 14. Flow cytometry quantification of total CD8⁺ T cells and percentage of Ki67⁺ or CD44⁺ CD8⁺ T cells out of total CD8⁺ T cells in KPC mice at day 7. n = at least 7 mice/group. **(H)** Flow cytometry quantification of various myeloid infiltrates: (i) monocytes (CD45⁺ CD3⁻ CD19⁻ Ly6C⁺), (ii) TAMs (CD45⁺ CD3⁻ CD19⁻ Ly6C⁻ Ly6G⁻ CD11b⁺ F4/80⁺ MHC-II⁺), (iii) granulocytes (CD45⁺ CD3⁻ CD19⁻ Ly6C⁻ Ly6G⁺), and (iv) eosinophils (CD45⁺ CD3⁻ CD19⁻ Ly6C⁻ Ly6G⁻ CD11b⁺ F4/80⁻ MHC-II⁻) in KPC vehicle or RT-treated mice at days 7 and 14. n = at least 7 mice/group. **(I)** Frequency distribution of CD8⁺ T cell proximity to nearest CK19⁺ tumor cell in KPC-OG mice treated as indicated. n = at least 7 mice/group. **(J)** IHC analysis of Ki67 on tissues from KPS-OG mice at day 14 post-RT. n = at least 7 mice/group. **(K)** Representative CD8 α /CK19 IHC in KPC-OG mice and CD8 α IHC in KPS-OG mice from **Fig. 1J-K**. **(L)** Analysis of collagen density in KPC-OG and KPS-OG vehicle mice in **Fig. 1J-K**. n = at least 7 mice/group.

All graphs depict mean +/- SEM. For comparisons between two groups, “*” denotes p < 0.05 by two-tailed t-test. “ns” denotes not significant.