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GCC-Targeted CAR-T Cell Therapy for Metastatic Gastric Cancer

Amanda Lisby, MS

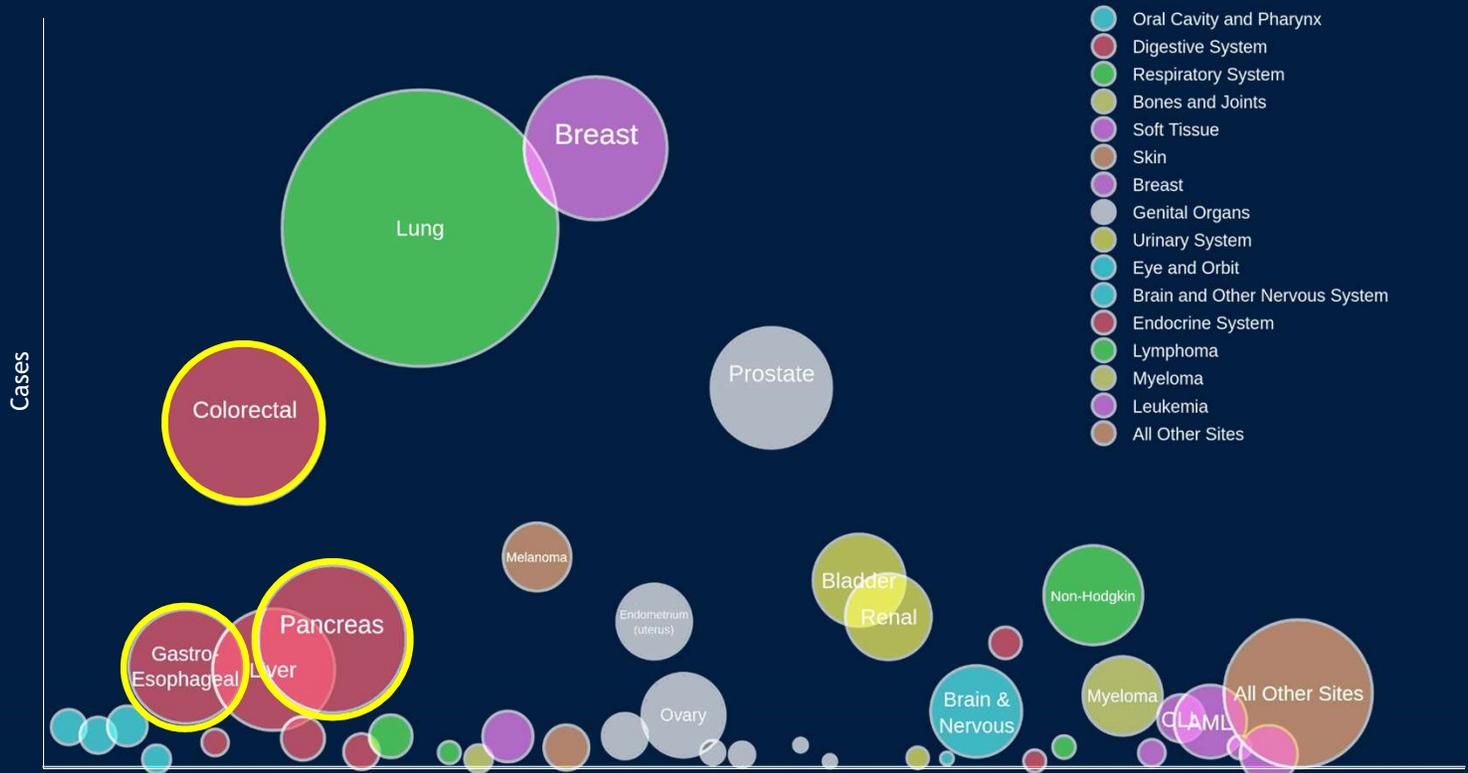
Adam Snook Laboratory

Department of Pharmacology and Experimental Therapeutics

Disclosures

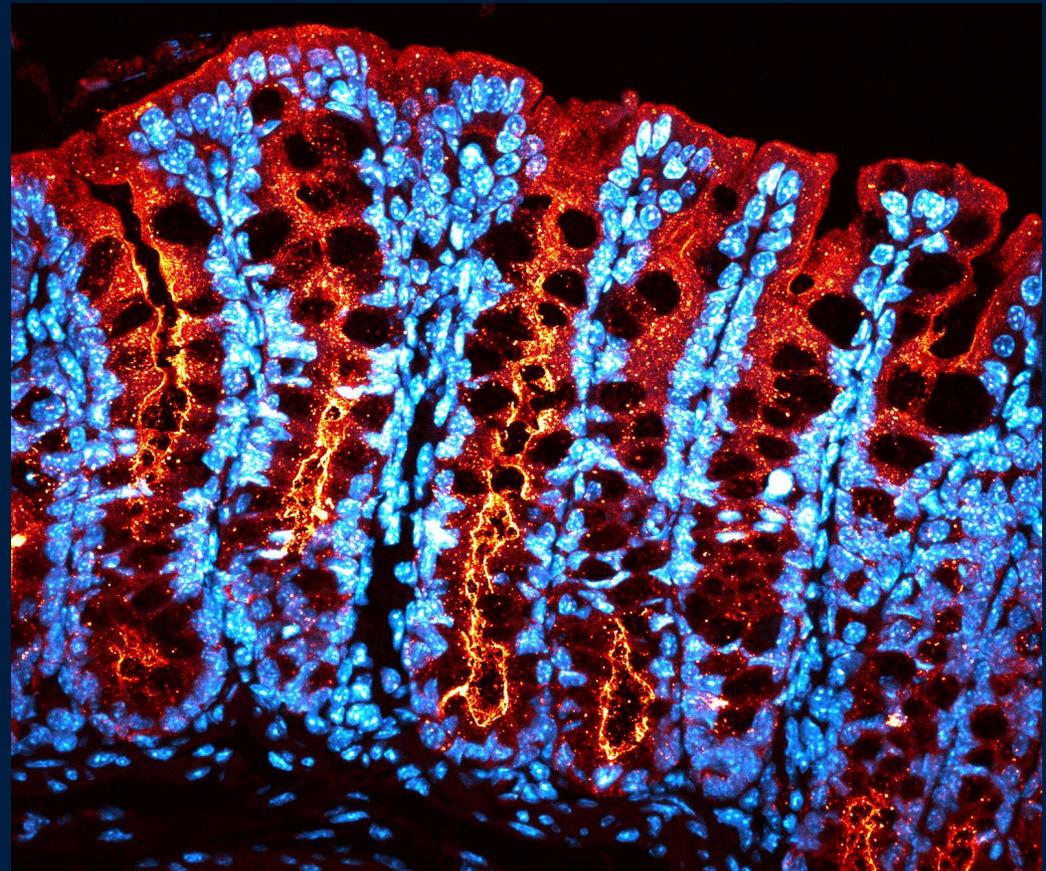
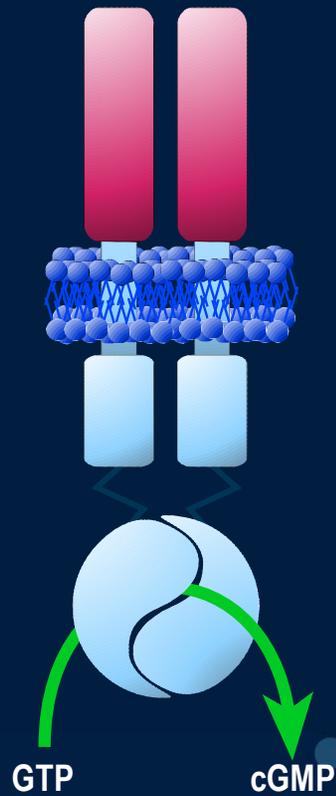
- There are no relevant disclosures to the presentation

Impact

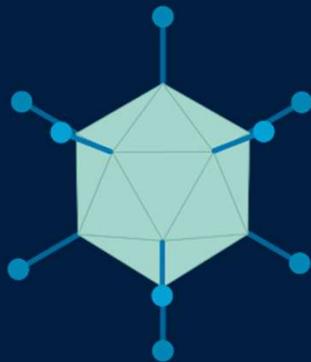
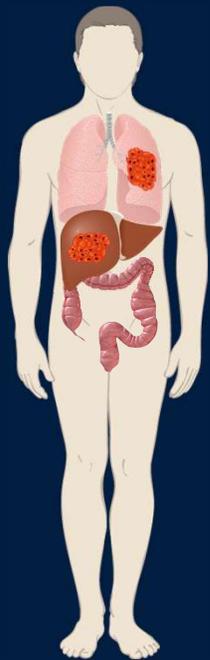


20% of people who die from cancer could be treated with GCC-targeted therapies

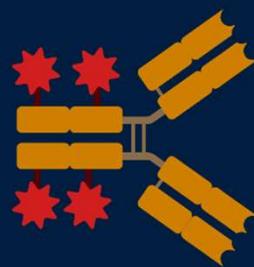
Guanylyl Cyclase C (GCC)



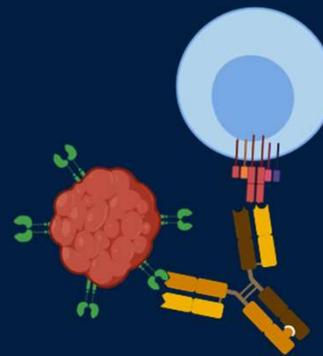
GCC Immunotherapy



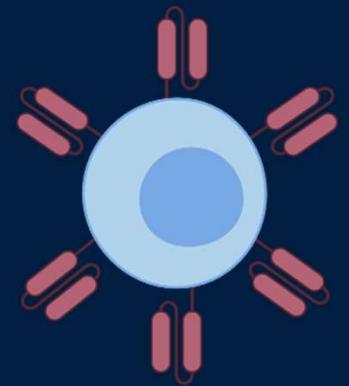
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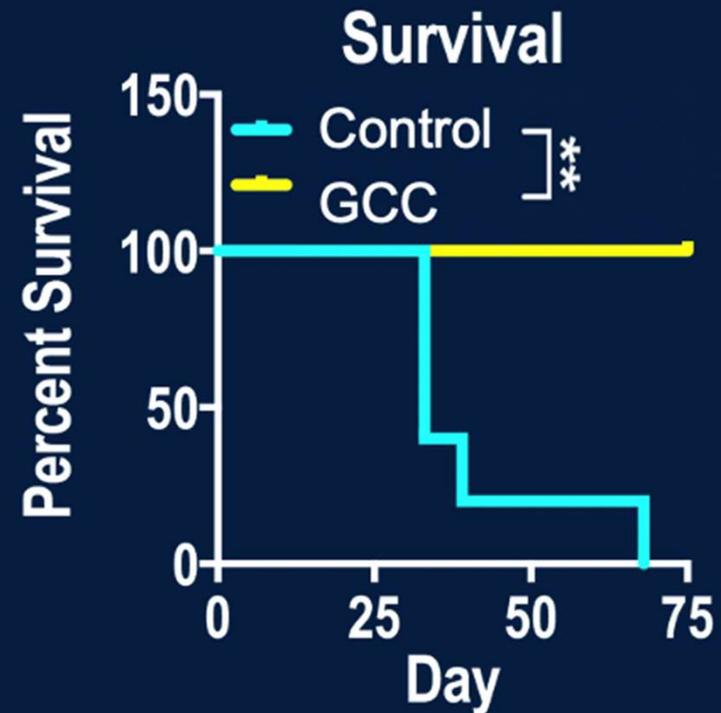
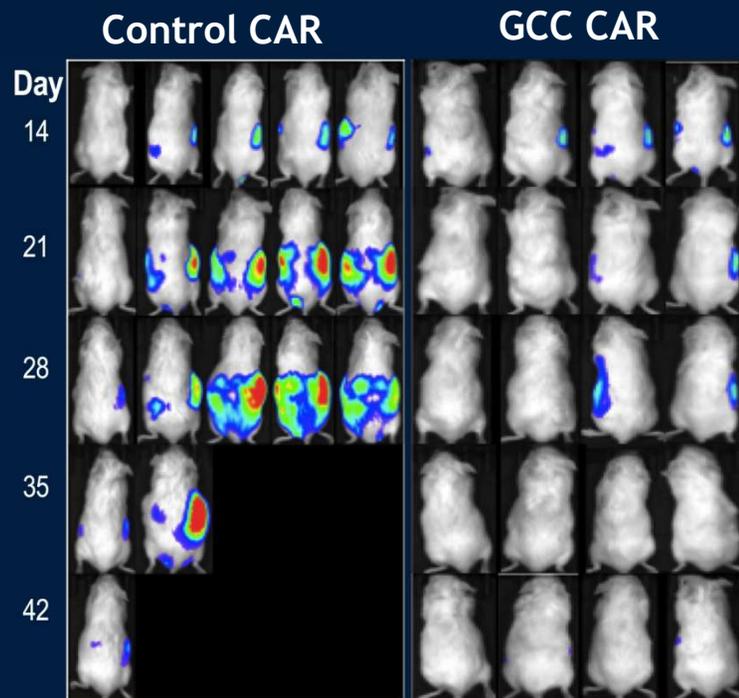
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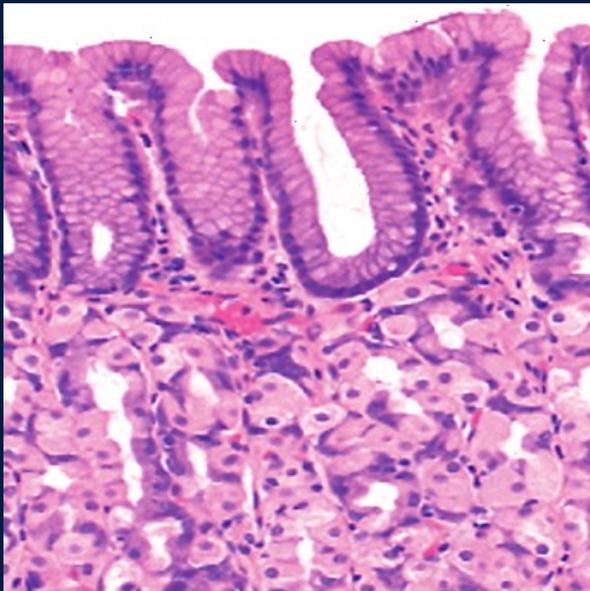


GCC CAR-T Cells in Colorectal Cancer

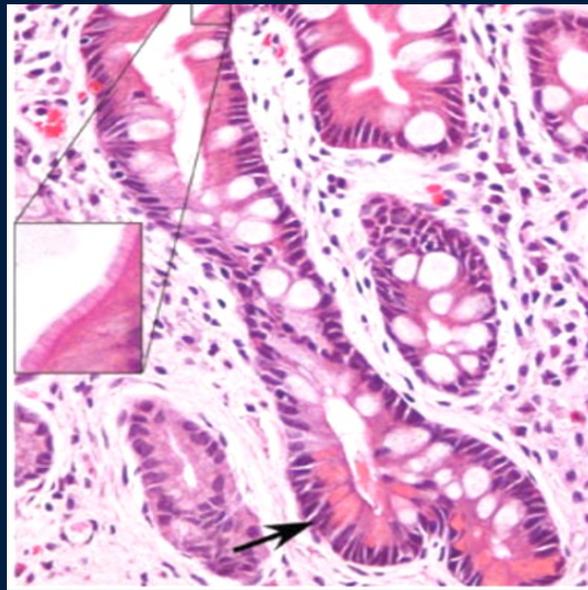


Magee et al. Cancer Immunol Res 2018; 6(5): 509-516.

Intestinal-Type Gastric Cancer



Normal Stomach

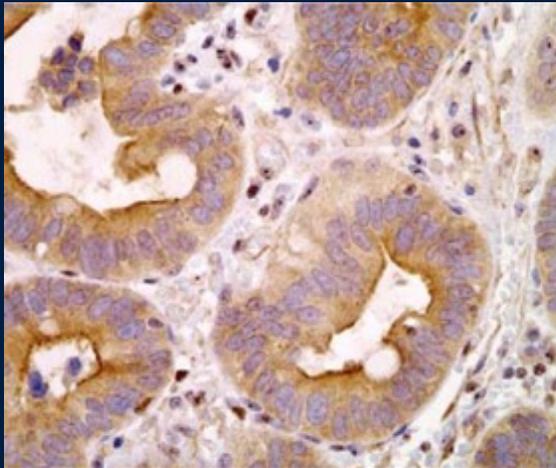


Intestinal-Type Gastric Cancer

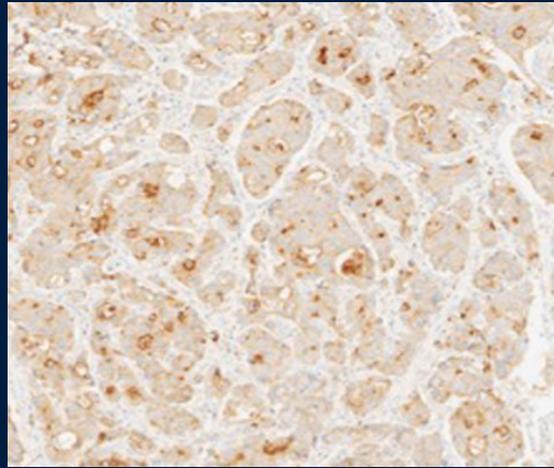


Normal Intestine

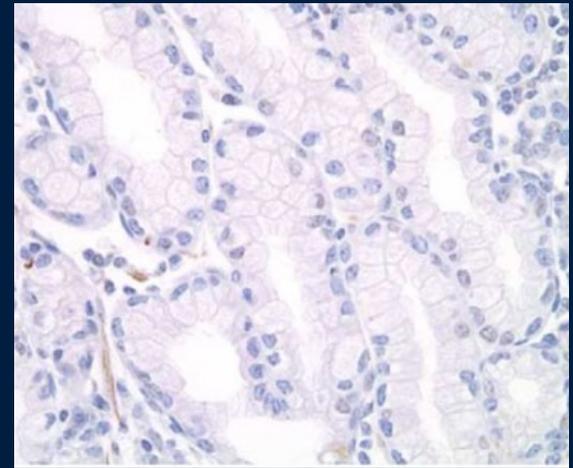
GCC and Gastric Cancer



Primary Cancer



Metastatic Cancer

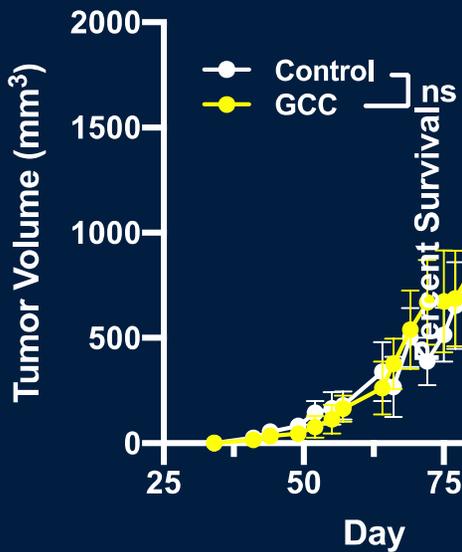


Normal Mucosae

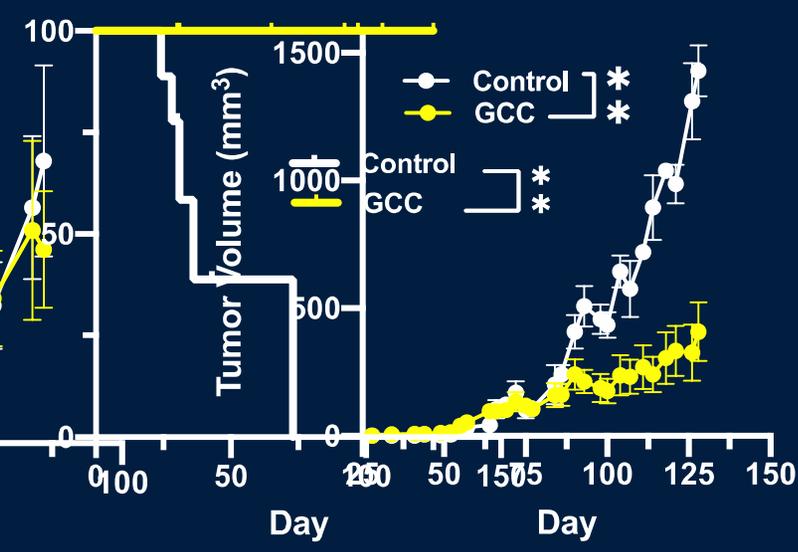
Birbe et al. Human Pathology. 2016;36.
Danaee et al. PLoS ONE. 2017;12.

GCC CAR-T Cell Efficacy in Gastric Cancer

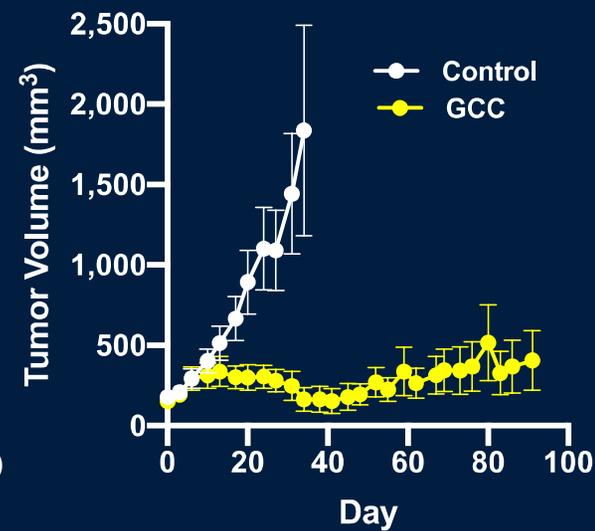
GCC Negative Tumor (SW480)



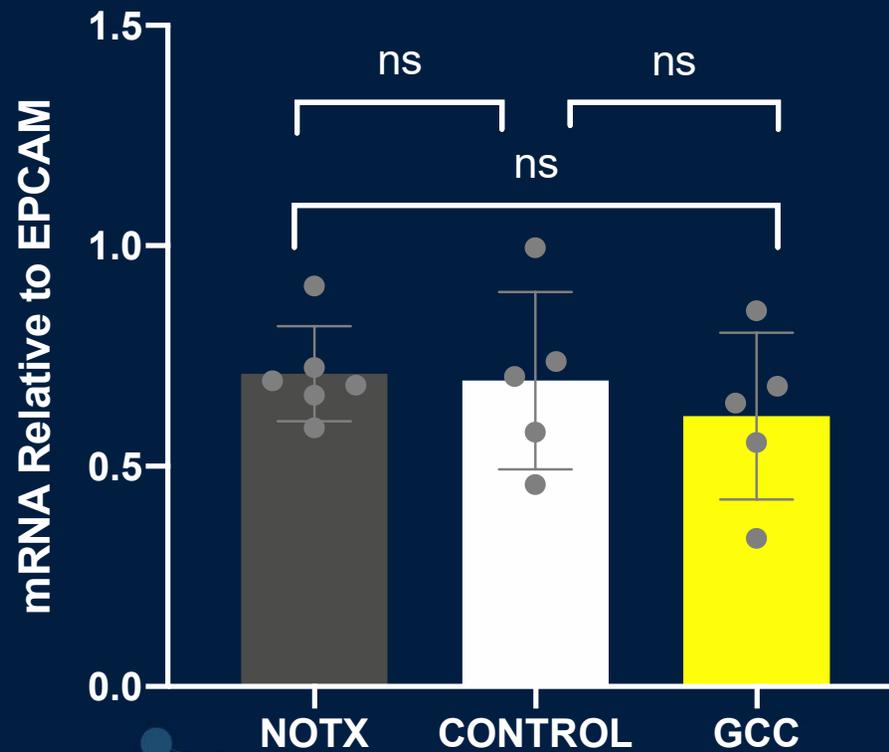
Survival GCC Positive Tumor (T84)



Gastric PDX

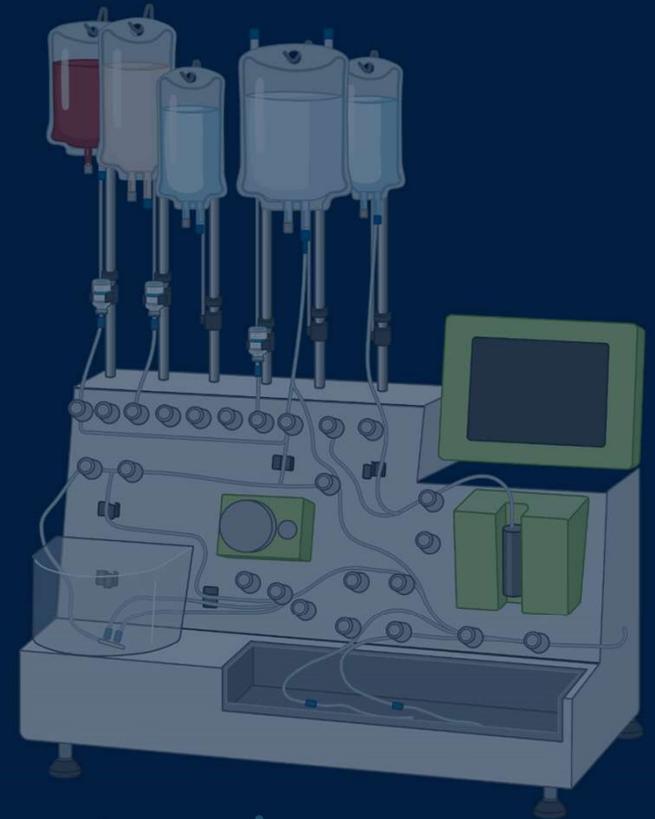


Treated Tumors Maintain GCC Antigen Expression



Summary

- GCC-CAR T Cells are safe and effective in Human CRC Models
- GCC-CAR T Cells are *effective* in Human Gastric Cancer Models
- GCC-CAR T Cells may not be affected by common tumor escape-mechanisms
- Opportunity for GMP translation to treatment in the clinic



Contributors

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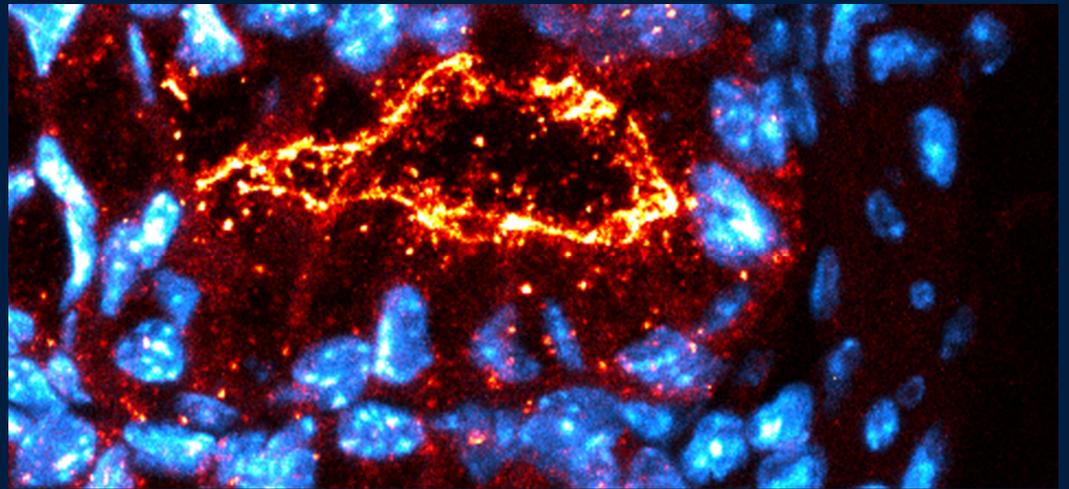
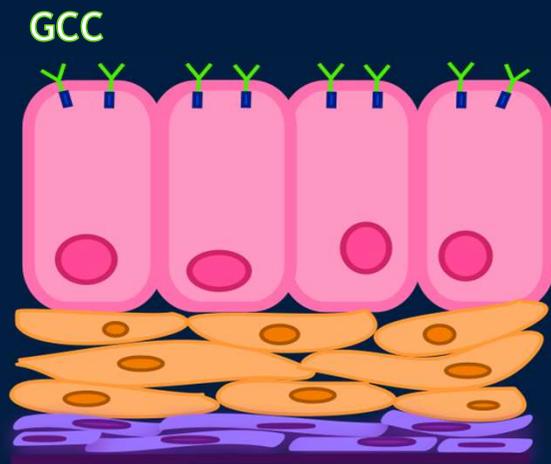




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GCC Compartmentalization



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