

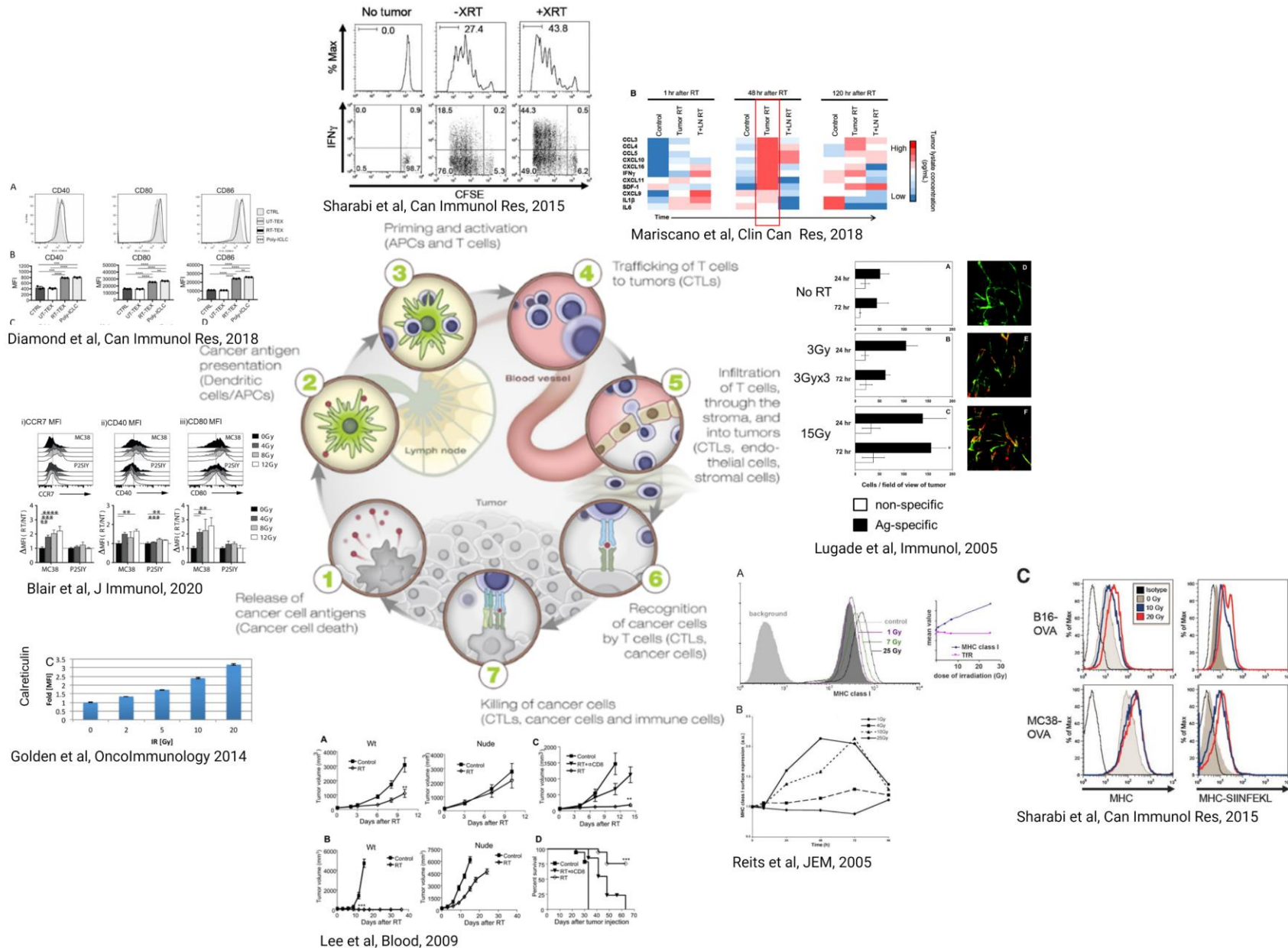
IMMUNOGENIC IMPACT OF CYTOTOXIC THERAPIES

Chemotherapy and Radiation

Immunogenic Chemotherapy

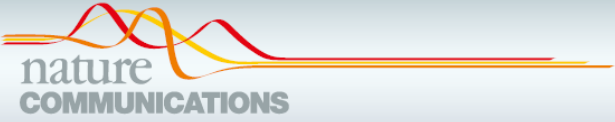
	Immunomodulation			Immunologic Cell Death
Chemotherapy Agent	Tumor Antigenicity	Sensitization to Immune Attack	Disruption of Survival Signaling	DAMPs (Calreticulin, ATP, HMGB1, Type I IFN)
5-azacytidine	X			
5-FU	X			
Anthracyclines (doxorubicin, daunorubicin, epirubicin, idarubicin, mitoxantrone)	X	X	X	X
Bleomycin			X	
Bortezomib				X
Cisplatin, Carboplatin		X	X	
Cyclophosphamide	X			X
Etoposide			X	
Gemcitabine	X			
Methotrexate			X	
Mitomycin C			X	
Oxaliplatin	X			X
Taxanes (docetaxel, paclitaxel)	X	X		

Immunogenic Effects of Radiation



TGF β AND IMMUNE EXCLUSION

TGF β and Immune Exclusion



ARTICLE

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OPEN

TGF- β -associated extracellular matrix genes link cancer-associated fibroblasts to immune evasion and immunotherapy failure

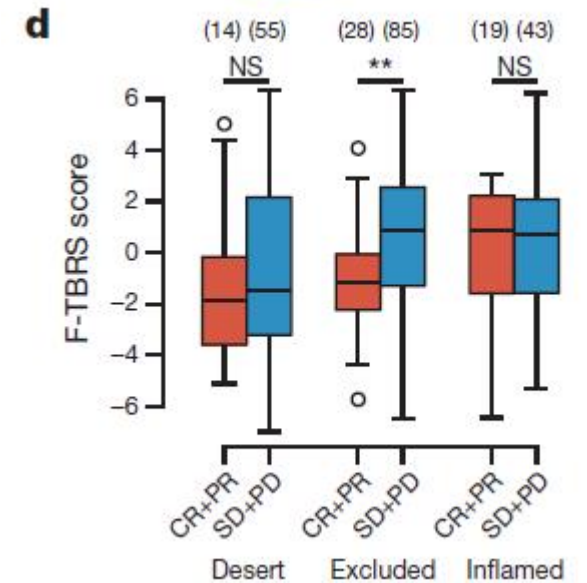
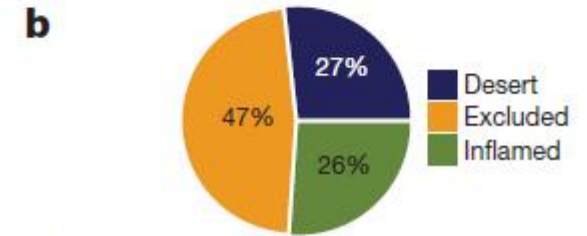
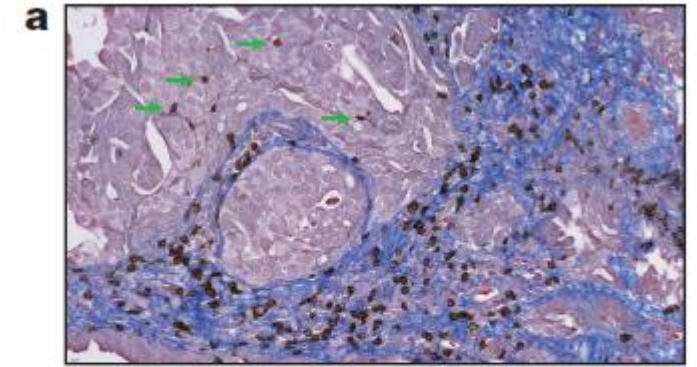
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LETTER

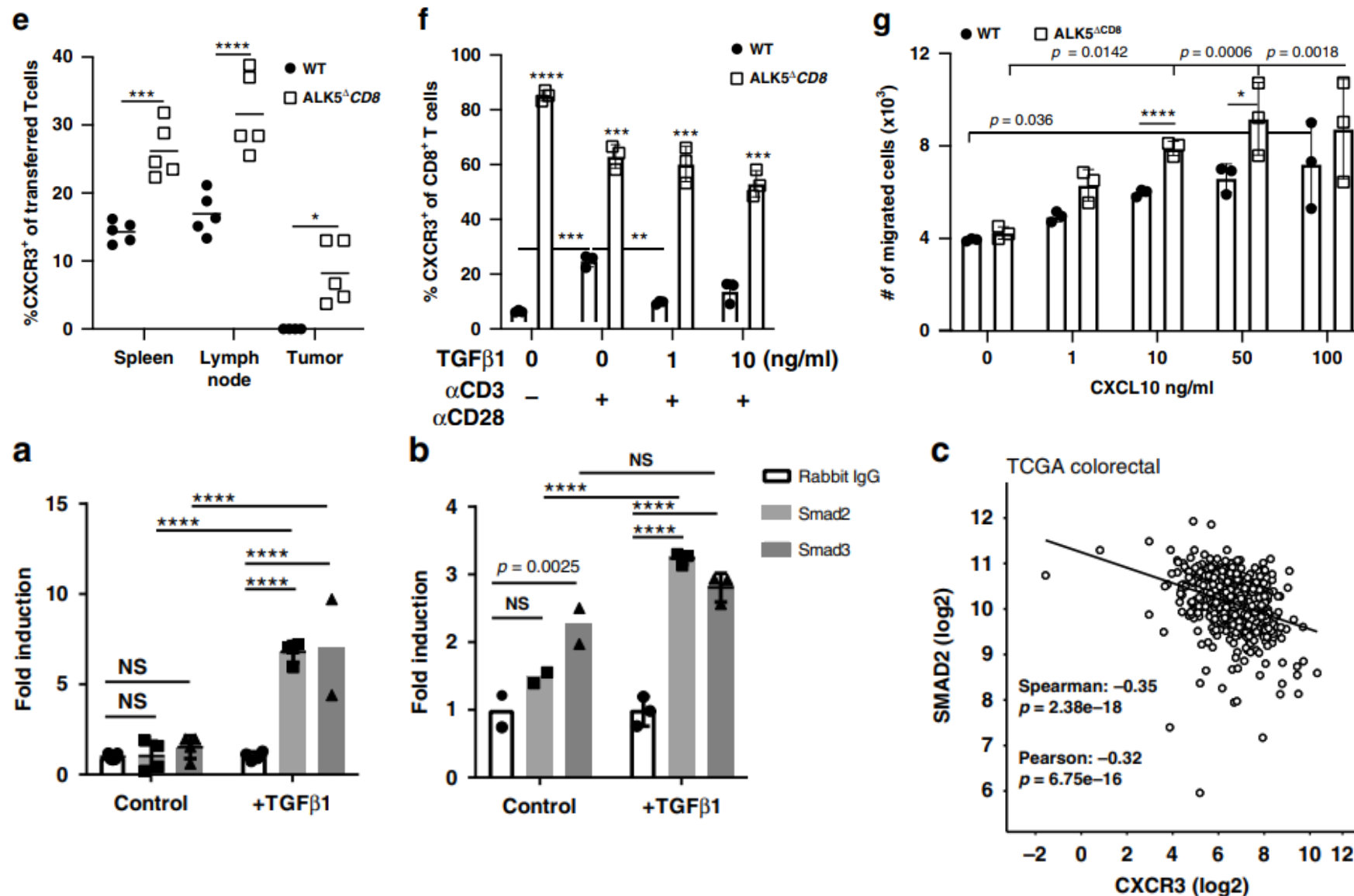
doi:10.1038/nature25501

TGF β attenuates tumour response to PD-L1 blockade by contributing to exclusion of T cells

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TGF β suppresses CD8⁺ T cell expression of CXCR3, tumor trafficking



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TGF β suppresses CD8⁺ T cell expression of CXCR3 and tumor trafficking

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TGFβ inhibition increases T cell infiltration, improves response to chemoRT

Galunisertib plus neoadjuvant chemoradiotherapy in patients with locally advanced rectal cancer: a single-arm, phase 2 trial

Tomoko Yamazaki, Andrew J Gunderson, Miranda Gilchrist, Mark Whiteford, Maria X Kiely, Amanda Hayman, David O'Brien, Rehan Ahmad, Jeffrey V Manchio, Nathaniel Fox, Kayla McCarty, Michaela Phillips, Evelyn Brosnan, Gina Vaccaro, Rui Li, Miklos Simon, Eric Bernstein, Mary McCormick, Lena Yamasaki, Yaping Wu, Ashley Drokin, Trevor Carnahan, Yy To, William L Redmond, Brian Lee, Jeannie Louie, Eric Hansen, Matthew C Solhjem, Julie Cramer, Walter J Urba, Michael J Gough, Marka R Crittenden, Kristina H Young

