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IN BRIEF

STONES

Individual gut microbiome in nephrolithiasis

In a new study, Tang *et al.* report that patients with kidney stones might have their own particular gut microbiome. The researchers found significant differences in the abundance of various bacterial genera between 13 patients with kidney stones and 13 healthy matched controls. The presence of kidney stones was associated with an increased abundance of pro-inflammatory bacteria such as *Megamonas*, *Phascolarctobacterium*, *Escherichia–Shigella*, and *Sutterella*.

ORIGINAL ARTICLE Tang, R. *et al.* 16S rRNA gene sequencing reveals altered composition of gut microbiota in individuals with kidney stones. *Urolithiasis* https://doi.org/10.1007/s00240-018-1037-y (2018)

BLADDER CANCER

BBN mouse model mimics human MIBC

The *N*-butyl-*N*-(4-hydroxybutyl)-nitrosamine (BBN) mouse model mimics human muscle-invasive bladder cancer (MIBC) at a molecular and a mutational level, according to a new paper. Fantini and co-workers found that BBN tumours showed overexpression of basal cancer subtype markers and a high mutational burden with frequent mutations in *Trp53*, *Kmt2d*, and *Kmt2c*, similar to human MIBC. They say that their findings provide a strong rationale for using the BBN mouse model in molecular and drug discovery studies.

ORIGINAL ARTICLE Fantini, D. *et al.* A carcinogen-induced mouse model recapitulates the molecular alterations of human muscle invasive bladder cancer. *Oncogene* https://doi.org/10.1038/s41388-017-0099-6 (2018)

PROSTATE CANCER

Genomic drivers of resistance to AR therapies

Researchers in Canada have identified genomic drivers of resistance to androgen-receptor (AR)-directed therapies in men with metastatic castration-resistant prostate cancer (mCRPC). Annala *et al.* performed whole-exome and/or deep targeted sequencing of plasma-derived cell-free DNA samples from 202 treatment-naive men with mCRPC randomly assigned to abiraterone or enzalutamide. Defects in *BRCA2* and *ATM* were associated with poor clinical outcomes independently of clinical prognostic factors and abundance of circulating tumour DNA. Deleterious alterations in *TP53* were also associated with reduced time to progression.

ORIGINAL ARTICLE Annala, M. *et al.* Circulating tumor DNA genomics correlate with resistance to abiraterone and enzalutamide in prostate cancer. *Cancer Discov.* https://doi.org/10.1158/2159-8290.CD-17-0937 (2018)

KIDNEY CANCER

PDL1 as a biomarker in high-risk RCC

Increased $CD8^+$ T cell density is associated with increased disease-free survival (DFS) in patients with locoregional high-risk renal cell carcinoma (RCC) who receive adjuvant sunitinib but not in those receiving placebo, according to a new study. In their analysis of tissue biomarkers, George *et al.* also found that PDL1 expression might have prognostic value in this patient group: among placebo-treated patients, DFS was shorter in those with $PDL1^+$ tumours than in those with $PDL1^-$ tumours, and among all patients with $PDL1^+$ tumours, DFS was longer in those on sunitinib than in those on placebo.

ORIGINAL ARTICLE George, D. J. *et al.* Immune biomarkers predictive for disease-free survival with adjuvant sunitinib in high-risk locoregional renal cell carcinoma: from randomized phase III S-TRAC study. *Clin. Cancer Res.* https://doi.org/10.1158/1078-0432.CCR-17-2822 (2018)