

IN BRIEF

➔ KIDNEY CANCER

High-affinity Fc- γ variants improve IL-2 responses

High-dose IL-2 is currently being investigated as a treatment of metastatic renal cell carcinoma (mRCC). An analysis of fragment crystallizable (FC)- γ variants in patients with mRCC receiving high-dose IL-2 as a part of the SELECT trial reveals that patients with single-nucleotide polymorphisms (SNPs) that confer high-affinity antibody binding have improved responses to high-dose IL-2 compared with those that lack such SNPs, owing to improved antibody-induced tumour destruction.

ORIGINAL ARTICLE Erbe, A. K. *et al.* FC γ R polymorphisms influence response to IL-2 in metastatic renal cell carcinoma. *Clin. Cancer Res.* <http://dx.doi.org/10.1158/1078-0432.CCR-16-1874> (2016)

➔ BLADDER CANCER

Autologous NK cells active against high-risk cancer

New research indicates that natural killer (NK) cell based adoptive immunotherapy might be an effective treatment of high-grade non-muscle-invasive bladder cancer (NMIBC). Cytokine-activated NK cells derived from patients with NMIBC and from volunteers without cancer were activated *in vitro*, and the effects of these cells were investigated in stem-like cancer cells and mouse models of NMIBC. Activated NK cells from donors without cancer, but not from those with NMIBC, were able to shift the cells towards a more differentiated, cisplatin-sensitive phenotype. Furthermore, transurethral infusion of NK cells from donors without cancer into mouse models of NMIBC resulted in dramatic reductions in tumour burden.

ORIGINAL ARTICLE Ferreira-Teixeira, M. *et al.* Natural killer cell-based adoptive immunotherapy eradicates and drives differentiation of chemoresistant bladder cancer stem-like cells. *BMC Med.* <http://dx.doi.org/10.1186/s12916-016-0715-2> (2016)

➔ URINARY INCONTINENCE

Effects of anterior root stimulation are sustained

Long-term follow-up data (median 11.7 years) are available from 111 patients that underwent sacral deafferentation and implantation with an anterior root stimulator. The maximum detrusor pressure during stimulation and during the storage phase both decreased significantly with time, with an increase in bladder compliance. However, none of these changes were found to be clinically relevant, indicating that sacral anterior root stimulation is a sustainable long-term intervention.

ORIGINAL ARTICLE Krebs, J. *et al.* Long-term course of sacral anterior root stimulation in spinal cord injured individuals: the fate of the detrusor. *NeuroUrol Urodyn.* <http://dx.doi.org/10.1002/nau.23161> (2016)

➔ KIDNEY CANCER

Somatic mutations predict survival duration

Data from a genetic analysis of a cohort of patients with metastatic renal cell carcinoma (mRCC) receiving everolimus or sunitinib as part of the RECORD-3 trial reveal that the presence of certain somatic mutations is associated with superior progression-free survival (PFS) outcomes. Patients with mutations in polybromo 1 (*PBRM1*) or lysine demethylase 5C (*KDM5C*) had significant improvements in PFS following treatment with everolimus or sunitinib, respectively, whereas those with BRCA1 associated protein 1 (*BAP1*) mutations had inferior PFS durations with everolimus.

ORIGINAL ARTICLE Hsieh, J. J. *et al.* Genomic biomarkers of a randomized trial comparing first-line everolimus and sunitinib in patients with metastatic renal cell carcinoma. *Eur. Urol.* <http://dx.doi.org/10.1016/j.eururo.2016.10.007> (2016)