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IN BRIEF

UROLOGICAL CANCER

'Watch and wait' or 'watch and worry'?

The Scandinavian Prostate Cancer Group has published the results from the extended follow up of the SPCG-4 study, which compared watchful waiting with radical prostatectomy in men with early-stage prostate cancer. Extended follow-up 23 years after the initiation of the study has confirmed a substantial reduction in mortality after radical prostatectomy: 247 of the 348 men in the watchful-waiting group died, compared with 200 of 347 men in the surgery group.

Original article Bill-Axelsson, A. *et al.* Radical prostatectomy or watchful waiting in early prostate cancer. *N. Engl. J. Med.* **370**, 932–942 (2014)

PAEDIATRIC ONCOLOGY

Identifying aggressive neuroblastoma

Neuroblastoma is responsible for 15% of cancer deaths in children younger than 5 years of age. Because of its heterogeneous clinical course (from spontaneous regression to incurable high-risk disease), it is essential to stratify patients so that the right course of action can be taken. Viprey *et al.* have identified three types of mRNAs (PHOX2B, tyrosine hydroxylase [TH], and doublecortin [DCX]) that can be detected in peripheral blood and bone marrow. In a cohort of 290 children, high levels of these mRNAs at diagnosis identified those children with ultra high-risk disease who would benefit from new and more-aggressive treatments.

Original article Viprey, V. F. *et al.* Neuroblastoma mRNAs predict outcome in children with stage 4 neuroblastoma: a European HR-NBL1/SIOPEN study. *J. Clin. Oncol.* doi:10.1200/JCO.2013.53.3604

BASIC RESEARCH

Inhibiting autophagy to fight BRAF resistance

Targeting BRAF has revolutionized the treatment of melanoma but sooner or later resistance to these treatments develops. Now, in biopsies from patients with melanoma, Ma *et al.*, have reported that samples of tumours treated with BRAF inhibitors showed increased levels of autophagy compared with baseline. Combined treatment with BRAF and autophagy inhibitors promoted tumour regression in xenografts originally resistant to BRAF inhibition.

Original article Ma, X.-H. *et al.* Targeting ER stress-induced autophagy overcomes BRAF inhibitor resistance in melanoma. *J. Clin. Invest.* **124**, 1406–1417 (2014)

BIOMARKERS

Peeing on a stick

Researchers have developed nanoscale agents that allow the diagnosis of noncommunicable diseases—such as colorectal cancer—through a simple urine paper-test. The method is based on the principle of detecting disease-specific biomarkers with engineered exogenous molecules. The authors injected synthetic protease-sensitive nanoparticles into the blood stream of mice; once the nano-agent passively reached the disease site, it was cleaved by MMP9, a matrix metalloproteinase that is specifically deregulated in colorectal cancer, releasing a reporter that was eliminated in the urine. As more than 500 proteases can be deregulated in cancer, this approach could be tailored for many other types of tumours.

Original article Warren, A. D. *et al.* Point-of-care diagnostics for noncommunicable diseases using synthetic urinary biomarkers and paper microfluidics. *Proc. Natl Acad. Sci. USA* doi:10.1073/pnas.1314651111