Read all about it... It can be awkward when a patient asks you about a report in their favourite tabloid detailing an amazing research breakthrough or a 'cutting-edge' new treatment / test and you don't know what they are talking about! So this section fills you in on the facts.

Hope for prostate cancer patient after scientists develop blood test that shows when treatment isn't working

Published in The Daily Mail
17 September 2014

The article opens with the line, "A simple blood test has been developed to signal when common treatment for prostate cancer has stopped working." Unfortunately, the author of this article appears to have assumed that because many routine blood tests these days are deemed 'simple', that any kind of blood test is, by extension, 'simple'. The article relates to a recently published paper in the journal *Science Translational Medicine*. The work presented has been carried out in the United States, Italy and the Institute of Cancer Research and The Royal Marsden here in the UK. The research examines tumour clone dynamics in ERG-positive prostate cancer patients. ERG is a proto-oncogene which has been found to be activated in 70% of all prostate tumours. ERG participates in the phenomenon of chromosomal translocation, i.e. during mitosis the ERG proto-oncogene is spliced into different chromosomes, creating 'fusion gene products'. The research team used these and other commonly occurring deletions to identify, from genetic analysis of prostate cancer cells in blood samples, different mutational cell-lines (or clones) arising as prostate cancer progressed. The theoretical clinical application of this technology was identified when the team showed a temporal association between clinical progression of disease and emergence of clones / cell-lines with an androgen receptor mutation known to be activated by glucocorticoids (steroids). Thus, a blood test could in theory be used to monitor patients with advanced prostate cancer and identify the optimum time to stop treatment with dexamethasone. Simple isn't it? I personally have absolutely no doubt that the work of this nature that is being carried out at the Institute of Cancer Research is going to lead to some truly game-changing breakthroughs in the future.

Eating walnuts every day could reduce the chance of prostate cancer

Published in The Daily Express
14 November 2014

Another issue, another food story. I feel it is worth including these stories as they are always of great interest to patients. This story relates to a piece of research recently published in *The Journal of Medicinal Foods*. A team at the University of California fed walnuts to TRAMP mice (TRansgenic Adenocarcinoma of the Mouse Prostate – i.e. mice bred to develop prostate cancer). They found at the end of the 18-week study period that the genitourinary tract of walnut-fed mice weighed less than those of control mice. The team could not isolate which component of walnuts may have this effect and how this may relate to prostate cancer in humans is unknown. Last issue's tomato research was very compelling and worthy of mention in a consultation; this story is of some interest but I think it has to be put in the pile with the carrots, apricots and broccoli for now.

Sex with 21 women lowers risk of prostate cancer, academics find

Published in The Telegraph
8 October 2014

The article references research from Montreal, published in *Cancer Epidemiology*. The researchers compared 1600 French speaking Canadians with histologically confirmed prostate cancer against 1600 control subjects picked from the electoral register. They found that men with 20 or more female partners in their lifetime (once adjusted for age, ethnicity, family history) had a decreased risk of developing prostate cancer. It is unclear why this would be. It is also unclear whether this evidence would be admissible as a defence in divorce proceedings.

Prostate cancer could be 'switched off' with injection

Published in The Telegraph
10 November 2014

At first glance, any urologist would be forgiven for thinking that this is an article about luteinising hormone-releasing hormone (LHRH) agonists that is really, really late to the party. In fact, the article is about new research into a drug agent that inhibits serine/threonine-protein kinase (SRPK1) activity. SRPK1 is an enzyme that plays a role in genetic splicing by interacting with various intra-cellular splicing factors. In the October issue of *Oncogene*, a team made up of researchers from Nottingham and Bristol detailed how they tested the hypothesis that SRPK1 was critical in the splicing and production of vascular endothelial growth factor A (VEGF-A), which is upregulated in prostate cancer and contributes to tumour growth by promoting angiogenesis. They found that in a PC-3 prostate cancer cell line with knockdown (inactivation) of the SRPK1 gene, there was production of an anti-angiogenic VEGF-A isomer which inhibited growth of tumour. They also tested a small molecule inhibitor of SRPK-1 (the injection mentioned in The Telegraph story) which inactivated the SRPK-1 gene in unadulterated cell lines and produced the same anti-angiogenic effect. As mentioned in The Telegraph article, biotech company Exonate (a subsidiary of The University of Nottingham) is hoping to bring an SRPK-1 inhibiting drug to market in the future. Clearly, any kind of clinical trial is a long way off.

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