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.

HIV drug 'dramatically SLOWS' spread of prostate cancer

The Daily Express, 1 December 2014

This article references the research of Dr Richard Pestell of Thomas Jefferson University, Philadelphia, USA. Dr Pestell has published previous research on CCR5 receptors in cancer. CCR5 is a cytokine receptor on the surface of white blood cells. These receptors, when activated, trigger processes such as chemotaxis and degranulation. CCR5 also happens to be a receptor for the HIV virus, allowing the virus to bind to and enter a target cell. This discovery led to the engineering of CCR5 antagonists as 'entry inhibitors' for HIV. Dr Pestell reports that these HIV drugs may have an effect in regulating cellular proliferation, invasion and metastasis in cancer as the host immune response to a cancer is a significant factor in its potential for invasion and metastasis. The research centres around 'Src'-type kinases. These Src family kinases play a role in intra-cellular signalling pathways and increased activity of this family of kinases has been observed in prostate cancer, however this is not due to any specific mutation of the Src family kinases and is just a reflection of there being more activity generally within cancer cells. The paper details how Dr Pestell introduced the 'v-Src' oncogene to prostate cells in lab mice. This variant Src gene is highly oncogenic and it stimulates mitosis and cell changes which confer increased invasiveness. Indeed, the mice in the lab developed metastases to brain and bone. Subsequent gene expression analysis of the cell lines, showed increased activation of a CCR5 signalling module. Dr Pestell's team then showed that a CCR5 receptor antagonising HIV drug reduced metastasis of the prostate cancer in mice. The catch here is that 'v-Src' is not a human prostate cancer oncogene, it doesn't occur in human prostate cells and it does not seem as though other Src mutations do either. It is therefore also unknown if the same CCR5 signalling module activation would occur in humans. Other researchers have noted though that prostate cancer does appear to be associated with increased CCR5 signalling and so the theory of blocking CCR5 receptors may be sound. The idea of looking for an already established and affordable drug that can also treat prostate cancer is laudable though and it will be interesting to see if anything comes from this in the future.

Man uses 3D printer to create replica of his kidney to help surgeons with operation

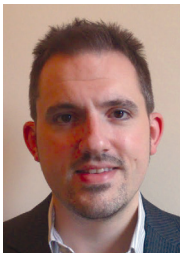
The Daily Express, 14 January 2015

You are probably quite aware that '3D printing' is very trendy at the moment. Inventive folks are 3D printing all sorts of things these days from food stuffs through to guns and cars. This story is about a gentleman who runs a '3D printing' firm. The piece explains that when he was undergoing surgery for kidney stones, he produced a model of his kidney (made from CT scans uploaded to his 3D printer) for his surgeon, which bivalves to show the stone within. The 3D-printed kidney pictured in the article does not seem to resemble a kidney and is essentially a 'blob' with some stones within, but clearly this is a pioneering first attempt at something new. If the technology could be adapted to show just the collecting system it might allow you to visualise and plan your puncture sites for a PCNL and aid as a reference during the procedure. If these techniques could then be further adapted to produce model organs and tumours made out of a 'life-like' rubber that can be cut and sutured, it could even help with both planning and training for other complex operations, such as a partial nephrectomy. My experience of printers in hospitals thus far has been one of frequent irritation and occasional rage (e.g. why is there never any paper in the tray when I need to print something?), but I genuinely hope this exciting technology may one day change all that.

Obesity 'raises prostate cancer risk': 10% of cases could be prevented if men kept themselves at a healthy weight

The Daily Mail, 19 November 2014

This Daily Mail article references a report from the World Cancer Research Fund's Continuous Update Project. A new meta-analysis has been carried out by Imperial College London of 104 pieces of research with a staggering 191,000 individual cases of prostate cancer. The most striking risk for prostate cancer seems to come from obesity. The data did not support the finding of last year's National Institute for Health Research (NIHR) trial that lycopenes from tomatoes reduced risk. The number of prostate cancer patients in this meta-analysis is 100 times more than the NIHR trial; therefore, this would seem to be the best available lifestyle advice for patients at this current time – just eat healthily, exercise and stay trim.



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