

# MINERVA

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## An unusual case of a painful big toe

Try the spot diagnosis in ENDGAMES, p 35

The NHS is potentially among the world's richest sources of data about the outcomes of individuals within a population. But when NHS England launched care.data in 2013, this overambitious plan to link social care and health data rapidly encountered a series of disasters. A new study (*Technology Science* 2015, <http://techscience.org/a/2015081103>) concludes that the current care.data programme is "highly problematic in its flawed protection of patient anonymity, an unsuitable opt-out system, unclear criteria for accessing the collected health data, and the risk it poses to the trust between patients and general practitioners." This lost opportunity means that England still cannot match the population databases of the Scandinavian countries and Taiwan.

The introduction of cardiac troponin assays about 15 years ago greatly increased the number of patients diagnosed with non-ST elevation myocardial infarction (NSTEMI). At the same time, better detection of muscle damage led to fewer people in the "unstable angina" category. A study from a single university hospital in Denmark using high sensitivity troponin assays found that among 516 patients with coronary syndromes, 7% had unstable angina, 26% had ST elevation myocardial infarction (STEMI), and 67% had NSTEMI (*American Journal of Medicine* 2015;128:852-60, doi:10.1016/j.amjmed.2015.01.044). At a median follow-up of 3.2 years, mortality was much higher in patients with NSTEMI than in those with STEMI (45% v 25%).

Wherever you look for vitamin D deficiency, you tend to find a lot. A meta-analysis of 36 studies of vitamin D levels in dark skinned migrants (*Nutrition* 2015, doi:10.1016/j.nut.2015.07.007) found a pooled prevalence of 77%. Immigrants from the Middle East had a somewhat higher prevalence than those from sub-Saharan Africa.

Can you remember injuring your shoulder? About two thirds of 1300 consecutive patients who underwent rotator cuff repair by a single surgeon answered yes to this question (*Journal of Shoulder and Elbow Injury* 2015, doi:10.1016/j.jse.2015.06.023). But their overall postoperative outcomes were the same as those who could not recollect an injury. However, those patients with a history of shoulder trauma who waited longer than 24 months had higher re-tear rates (20%) than those who had earlier surgery (13%).



A 14 year old boy presented with a two year history of a slow growing neck mass and 10 kg weight loss over six months. Laboratory data showed anaemia, raised lactate dehydrogenase, and alkalosis with normal electrolytes. He had no immune deficiency. Biopsy diagnosis was Burkitt's lymphoma, which has three clinical variants: endemic (mainly in African children), sporadic (worldwide occurrence in children and adults), immunodeficiency associated (seen in HIV). Burkitt's lymphoma usually presents in extranodal sites of head and neck. Diagnosis is based on biopsy and genetic testing. Owing to rapid growth and good response to chemotherapy, early diagnosis and treatment are important. He was referred to an oncology unit for ongoing treatment and died two years later.

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Parental consent obtained.

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Tau is the 19th letter of the Greek alphabet and also the name of proteins that stabilise microtubules in the central nervous system. After traumatic brain injury (TBI), plasma tau concentrations rise, and it has been found that military personnel with multiple TBIs have long term increases in total tau concentration (*JAMA Neurology* 2015, doi:10.1001/jamaneuro.2015.1383). In addition, total tau concentration is related to the severity of symptoms of post-concussive disorder.

"Hypofractionation for early-stage breast cancer: no more excuses" is the provocative title of an editorial on two studies, which shows that radiotherapy after surgery for early breast cancer can be given in fewer bursts (50 Gy in 25 fractions) than is current standard practice (*JAMA Oncology* 2015, doi:10.1001/jamaoncol.2015.2605). Hypofractionation involves giving 40.0-42.5 Gy to the whole breast in 15-16 fractions. Both a randomised trial and a registry study confirm that outcomes are equal.

When John Hinton first described the symptom load of patients dying on his medical ward in 1963, he concluded that death from heart or kidney failure could be just as distressing as death from cancer. A study of 335 patients with end stage renal disease referred for palliative care in Hong Kong found that the most prevalent symptoms were dyspnoea (63.7%), fatigue (51.8%), oedema (48.2%), pain (44.2%), and anorexia (38.1%) (*American Journal of Hospital and Palliative Medicine* 2015, doi:10.1177/1049909115598930). More interventional research and service provision are urgently needed worldwide.

Nutritionists in Australia decided to investigate why the children of New South Wales were more likely to eat processed pork products than fresh pork (*BMC Nutrition* 2015;1:14, doi:10.1186/s40795-015-0007-9). It seems that parents lack confidence in buying and preparing fresh pork and that supermarkets tend not to display it prominently. The authors state that fresh pork provides key nutrients such as protein, thiamine, and selenium, and that its lifetime consumption should be encouraged.

Wikipedia is probably the world's most consulted source of medical information. The original entry for kyphoplasty correctly described the procedure as "controversial" but someone changed the text to "well documented and studied." Detective work by James Heilman, a leading medical Wikipedian, traced the edit to a person who at the time was employed by Medtronic, manufacturer of a highly profitable kyphoplasty kit (<http://theatlntc/1hEokF2>). A recent Cochrane review (*Cochrane Database of Systematic Reviews* 2015;4:CD006349, doi:10.1002/14651858.CD006349.pub2) confirms the ineffectiveness of both vertebroplasty and kyphoplasty.

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