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Abdominal aortic aneurysms in women

Pinar Ulug and colleagues' study in *The Lancet* (June 24, p 2482)[1] showed that fewer women (34%) than men (54%) are eligible for endovascular aneurysm repair (EVAR) of intact abdominal aortic aneurysm (odds ratio [OR] 0·44, 95% CI 0·32–0·62). Furthermore, operative mortality after EVAR is higher in women than in men (OR 1·67, 95% CI 1·38–2·04). Ulug and colleagues suggested that if a reduced threshold for abdominal aortic aneurysm repair was introduced in women, this threshold could potentially alleviate mortality. By contrast, Johansson and Harris[2] argued that earlier intervention in women would not reduce mortality.

Compared with open repair, EVAR is associated with considerably lower operative mortality in men than in women (OR 1·76, 95% CI 1·35–2·30).[1] However, with each additional 1 cm increase in size of the abdominal aortic aneurysm, the likelihood of suitability for EVAR decreases by 5·3 times.[3] This finding might explain why fewer women (who normally have smaller aortas) than men are eligible for EVAR when their abdominal aortic aneurysm reaches 5·5 cm.[1]

A large cohort study[4] of 22 830 patients having EVAR or elective open repair showed that perioperative mortality increased with age for both groups (0·4% *vs* 2·5% for those aged 67–69 years, 0·8% *vs* 3·3% for 70–74 years, 1·3% *vs* 4·8% for 75–79 years, 1·6% *vs* 7·2% for 80–84 years, and 2·7% *vs* 11·2% for ≥85 years). Therefore, a delay in the use of EVAR was associated with about a seven-times increase in periprocedural mortality.

Finally, a Finnish population-based study reported that the abdominal aortic aneurysm diameter was less than 5·5 cm in six (24%) of 25 ruptured cases in women compared with only seven (5%) of 141 in men.[5] These results further support the reduction of threshold in women for EVAR.

Given these data,[1,3–5] what is the rationale of waiting for a 5·0 cm abdominal aortic aneurysm in a woman to become 5·5 cm, and why do Johansson and Harris[2] feel "we need better evidence"?

I declare no competing interests.

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Authors' reply

We thank Kosmas Paraskevas for his interest in our study.[1] The practice of medicine should be based on the best available evidence.[2] The best evidence for when women lose their morphological suitability for endovascular aneurysm repair (EVAR) comes from the study of Sweet and colleagues,[3] which showed that attenuation of the proportion of women suitable for EVAR comes only after the 5·5 cm threshold has been reached.

It is well recognised that surgical mortality for most procedures increases with age, and increasing age might be one factor that influences the decision as whether to offer a woman EVAR. There are important competing risks to consider when offering any surgery with substantial operative mortality. Robust evidence for what age or aortic diameter a woman should be offered EVAR to maximise life-expectancy, quality of life, or cost-effectiveness does not exist. The new European Society of Vascular Surgery guidelines for the management of patients with abdominal aortic aneurysm (currently under review) are likely to recommend a threshold aortic diameter of 5·0 cm for intervention in women, but the uncertainty of the evidence is reflected by the level C, class 2b classification provisionally given to this evidence under the American Heart Association and European Society of Cardiology grading system.[4]

As such, Johansson and Harris[5] are correct in pointing out that ideally "we need better evidence".

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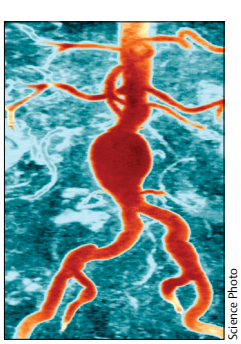
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FreeStyle Libre: contact irritation versus contact allergy

Nesrine Brahimi and colleagues (April 8, p 1396)[1] recently expressed their concern on the origin and management of cutaneous adverse events arising from FreeStyle Libre (Abbott Diabetes Care, Witney, Oxfordshire, UK), a sensor-based flash-continuous glucose monitoring system. A study by Bolinder and colleagues (Nov 5, 2016, p 2254)[2] indeed reported adverse skin effects when participants were using the device, although participants with a known sensitivity to medical adhesives had been excluded from the trial. In their reply to the Correspondence of Brahimi and colleagues, Bolinder and colleagues (April 8, p 1396)[3] stated that when cutaneous side-effects did occur they were mostly managed using barriers, or topical pharmaceuticals, or both, or by relocating the device to another area of the skin. The skin symptoms were believed to be related to skin temperature, humidity, or the duration of exposure, or a combination of these factors, indicating contact irritation rather than contact allergy. However, we recently reported[4] that isobornyl acrylate, which has been shown by chemical analysis to be present in FreeStyle Libre, is a skin sensitiser, provoking allergic contact dermatitis in 12 (80%) of 15 patients. All 12 patients developed severe, itchy dermatitis on the application site, which was sometimes complicated by a characteristic, allergic, spreading reaction. This spreading reaction should not be confused with contact irritation, which is strictly confined to the application site and is usually associated with a burning or stinging sensation instead of a profound itch. The onset of the dermatitis (≥2 weeks after the first use of the device) indicated primary sensitisation by isobornyl acrylate, instead of a pre-existing allergy to acrylates. Some patients had to discontinue use of the device as, contrary to Bolinder and colleagues' suggestions,[3] bandages and barrier sprays did not provide any relief, and the use of topical products under the adhesive was not considered a workable solution either. In contact allergy, complete avoidance of or a substantial decrease in exposure to the allergen responsible is the only effective solution, but this requires identification of the allergen, which in turn necessitates cooperation from the manufacturer. The identification of isobornyl acrylate in our case series[4] was only possible by close collaboration with several dermatology departments. Apparent difficulty in obtaining cooperation from pharmaceutical companies and no complete ingredient labels on medical devices such as FreeStyle Libre certainly contribute to incomplete investigations of many similar cases, and potentially to their under-reporting. In this regard, more effort by the pharmaceutical industry to aid accurate investigations would be of great value to patients who could benefit from the advantages such devices might offer in controlling their diabetes.

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Van den Bent MJ, Baumert B, Erridge SC, et al. Interim results from the CATNON trial (EORTC study 26053-22054) of treatment with concurrent and adjuvant temozolomide for 1p/19q non-co-deleted anaplastic glioma: a phase 3, randomised, open-label intergroup study. Lancet *2017;* **390:** *1645–53*—In the list of affiliations for this Article (published online first on Aug 8, 2017), "Prof R Stuff MD" should have read "Prof R Stupp MD". This correction has been made to the online version as of Oct 5, 2017, and the printed Article is correct.

GBD 2015 Tobacco Collaborators. Smoking prevalence and attributable disease burden in 195 countries and territories, 1990–2015: a systematic analysis from the Global Burden of Disease Study 2015. Lancet *2017;* **389:** *1885–1906*—In this Article (published online first on April 5, 2017), Karzan A Mohammad's second affiliation was missing from the Affiliations list, and "Joshua Salomon" should have been listed as "Joshua A Salomon" in the Collaborators list. In the appendix, all column headings in table S8 should have been "rate per 1000". These corrections have been made to the online version as of Oct 5, 2017.

Kroisel PM, Häusler M, Klaritsch P, et al. Targeted enrichment sequencing in two midterm pregnancies with severe abnormalities on ultrasound. Lancet *2017;* **389:** *1857–58*—In this Case Report, the third author's name should have been spelt Philipp Klaritsch. This correction has been made to the online version as of May 25, 2017.