Tom Nolan’s research reviews—5 May 2022
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Resistance is futile
Studies of surgical procedures and devices don’t have a great reputation. This study’s findings that a new device aimed at improving healing after surgery for rotator cuff tears is not effective—and may even be harmful—aren’t going to change clinical practice, but the study itself may set a new benchmark for surgical trials. The randomised control trial of the InSpace balloon was independently funded, recruited from the target population, blinded patients (who all underwent debridement), and randomised them during the procedure. It was also designed with pre-defined boundaries for futility, which meant that it could be halted early and the findings published before the device became widely used in clinical practice. Now that we know that high quality trials for surgical devices can be carried out in a timely manner, will this become the norm?
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An aspirin a day
I still occasionally come across patients who have been taking a daily low dose aspirin for the past 20 years or more after reading about it in a newspaper (back when people read them). The hopes of it being a wonder drug for primary prevention of cardiovascular disease didn’t last, and the most recent Scottish Intercollegiate Guidelines Network (SIGN) guidance doesn’t recommend aspirin for this purpose. It’s still clinging on in US guidelines though: the US Preventive Services Task Force have just updated their recommendations, stating: “The decision to initiate low-dose aspirin use for the primary prevention of cardiovascular disease (CVD) in adults aged 40 to 59 years who have a 10% or greater 10-year CVD risk should be an individual one.” This represents a downgrade from previous recommendations, albeit beginning from the age of 40 instead of 50 previously. For those aged 60 and above, starting aspirin for primary prevention is no longer recommended.
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Dementia risk between ethnic groups
Studies consistently find large differences in dementia risk between ethnic groups, and it appears again in this retrospective cohort study of 1 869 090 veterans in the US. The researchers found that Hispanic and Black participants were far more likely to be diagnosed with dementia than White participants. The mean age of the cohort was 69.4 years at baseline, and only 2.3% were women. In total, 13% were diagnosed with dementia during the mean follow-up period of 10.1 years. Compared with White participants, unadjusted hazard ratios were 1.99 for Hispanic participants and 1.55 for Black participants.

Boost for boosters
What type of evidence do we need when it comes to further booster vaccinations for covid-19? Will endpoints in studies continue to move away from deaths and hospital admissions to cases and laboratory markers of immunity? Will observational data do, or do we need to keep conducting costly randomised controlled trials? A lot of observational data on covid vaccines come from Israel, where they’ve tended to roll out vaccines early and quickly. The latest such study, of over 60s eligible for a fourth dose, concludes that: “rates of confirmed SARS-CoV-2 infection and severe covid-19 were lower after a fourth dose of BNT162b2 vaccine than after only three doses.” This supports the case for fourth doses in this age group, but residual confounding is hard to exclude in these studies, particularly given there may be important differences in care seeking behaviours and cautiousness between those who come forward quickly for boosters and those who don’t.

Judgement day for syncope score
It often feels as though clinical risk scores exist to compete with clinical judgment, but here’s a clinical risk score that incorporates clinical judgement and is almost entirely driven by it. The Canadian Syncope Risk Score (CSRS) comprises nine predictors of outcomes after a syncopal episode, including blood pressure, ECG findings, and the clinician’s classification of syncope at discharge from the emergency department (cardiac, vasovagal, or other). It’s designed to be used at the point of discharge from the emergency department to identify those who can be safely discharged—particularly older patients, who are more likely to have cardiac syncope and less likely to be discharged after a syncopal episode. A prospective, international, multicentre study sought to externally validate the CSRS, and found that it performed well on a composite primary endpoint of serious clinical plus procedural events at 30 days—but that was mostly driven by the clinical judgment part of the score.
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