Highlights from this issue

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The Triumvirate

After a terrific Summer of sport, this month's airwaves celebrates great sportsmen and women, the teams and the sporting highs and lows.

THE PENALTY SHOOTOUT

In sport, as in life, the future is uncertain and indeed there are only three things that can be predicted with certainty: death; taxes; and that Germany will win the penalty shootout. In this edition of *Thorax* Chen *et al* (See page 906) use propensity scoring to develop a prediction model for disease progression in COPD and compared whether disease variability was a better predictor of disease progression as measured by FEV1 than disease subtype, for example chronic bronchitis vs emphysema. Using the sort of complicated statistical assessment that a goalkeeper has probably done when facing a German penalty taker they found that COPD variability was indeed a better predictor of progression than disease subtype. Still won't help stop the Germans winning the penalty shootout though.

CURSE OF THE BILLY GOAT

When considering past trends 2016 was a momentous year for the Chicago Cubs who finally laid to rest the 'curse of the billy goat' after 71 years. There was nothing S shaped about this hex, the Cubs lost, and then lost some more, until eventually to many peoples disbelief they won. In this issue of *Thorax* (See page 875) Beard and colleagues describe smoking uptake and cessation over 43 years using three different surveys. Although the rates of change in smoking prevalence have changed over the years declines have occurred throughout, and are due to both reduction in uptake and increased in cessation. Fortunately for people with lung disease government policy has not been affected by disaffected goats!

AUSTRALIAN RULES

Aussie rules football involves 18 players chasing an oval ball in an oval field, often a modified cricket ground. In the case of the Brisbane Lions, home turf is the famous Gabba cricket ground. The game is fast, high scoring and requires elite

levels of cardiorespiratory fitness. In this issue of *Thorax* (See page 843), Hansen and colleagues study cardiorespiratory fitness in an older age group than is seen in the Brisbane Lions first team. Their cohort included over 4000 men, recruited in the early seventies, aged 40–59 years. Participants performed an ergometer test to measure VO_2max . Those with high levels of cardiorespiratory fitness had a 31% lower risk of later COPD after a mean of 28 years of follow-up. Early career researchers might want to think about 28 year follow-up of Aussie rules footballers to see if the association remains true in elite athletes – but don't leave it too late!

INTERNATIONAL TENNIS CIRCUIT

Ash Barty is a relatively new recruit to the international tennis circuit. However this 23 year old Queenslander is (as the time of writing) the world's number one. In the last year she has travelled the world, winning in Miami, Birmingham and topping this with her first Grand Slam singles title at the French Open. Tuberculosis is a world leader for a very different reason. There were 10 million new cases of TB and 1.6 million deaths in 2017. In this month's journal, Cohen and colleagues (See page 882) describe extensive global movement of multidrug-resistant TB. Using phylogenetic analysis of whole genome sequencing data, they describe 32 migrant MDR-TB clades with descendants in 17 different countries. Ash Barty attributes her individual success on the tennis court to the work of a team of behind-the-scenes professionals. Similarly international teams of researchers, combining data across diverse studies are needed to track and combat the international spread of multidrug-resistant TB.

DIVING INTO CANCER

Tom Daley specialises in the 10 metre diving event and is a double World champion. He needs to take risks but, unfortunately, these risks resulted in him surrendering his crown after finishing a shock seventh in the recent World Championships in South Korea. The risks investigated by Yong and colleagues were as important to a COPD patient as losing the world crown (See page 858) as the authors

investigated the effect of radiographic emphysema in assessing lung cancer risk in participants with negative baseline low-dose CT. Radiographic emphysema was independently associated with nearly double the hazard of lung cancer diagnosis and may help guide decisions surrounding further screening for eligible patients. Perhaps Tom will need to modify his dive risk to win his crown back.

HITTING THE TARGET

Brady Ellison was on target when he won the 2019 World Archery Championships with a perfect arrow in a tie-break. Maxime Patout and colleagues (See page 910) may have been emulating Brady's detailed eye for hitting the target when they were investigating the long-term outcome following admission for exacerbation of COPD. The authors analysed neural respiratory drive, as reflected by change in parasternal muscle electromyogram, in 120 patients with AECOPD. Factors independently associated with mortality post discharge were neural respiratory drive, age, carbon dioxide at admission and long-term oxygen use. Like Brady Ellison, perhaps a targeted approach to reducing neural respiratory drive and carbon dioxide may improve the long-term outcome in COPD.

PLATYPUS OR PLATYPNOEA?

The duck-billed platypus is an athletic, aquatic monotreme (egg-laying mammal) who is rarely to be found supine. Platypnoea—orthodeoxia on the other hand is nothing to do with egg-laying mammals. Test your diagnostic skills on this bubble contrast echo (See page 918).

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