Highlights from this issue

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SPIT IT OUT?

What can we expect novel therapies to do for patients with cystic fibrosis (CF)? Everyone wants a cure, but how will we know if we have achieved it? Mortality is only applicable if Methuselah was the principle investigator, because survival curves are so flat. Horsley *et al* (*see page 532*) have studied the response of 46 biomarkers to intravenous antibiotic treatment of CF pulmonary exacerbations (also known as CF lung attack, see *Thorax* passim) and ingeniously used the results to suggest which of these biomarkers might be useful for following the response to novel therapies, in their case the gene therapy trial. They studied five domains (symptoms, physiology, CT, and pulmonary and systemic inflammatory markers), and the winners were physiological (spirometry, lung clearance index), symptoms, CT scores (airway wall thickness, air trapping and large mucus plugs) and serum (C-reactive protein, interleukin 6 and calprotectin). Counter-intuitively, sputum markers were not helpful—another sacred cow dispatched to the abattoir! The online supplement should be a superb resource for all those designing CF treatment studies, and the fact that the sputum, like Sherlock Holmes's dog in the night-time, did nothing, is another warning that, in medicine, the obvious is almost certainly wrong.

BACK TO THE NAUGHTY SEAT AGAIN!

Britain may rule the waves (or maybe once did) but we remain bottom of the class for outcomes of treatment of many common cancers, including lung cancer. Sarah Walters and colleagues ((*see page 551*) Editors' Choice) investigated whether differences in lung cancer outcomes between six countries participating in the International Cancer Benchmarking Partnership could be due to a later stage at diagnosis. Nice though it would be to invoke this sort of cop-out, the uncomfortable truth is that differences in stage-specific outcomes are also important. Eric Lim and Sanjay Popat discuss why this might be the case (*see page 504*) and identify a number of areas where intervention might have a positive effect on outcomes. Low hanging fruit include increasing access to thoracic surgeons, faster uptake of new treatment modalities, and more funding for research. As we write, the preparations for Baroness Thatcher's funeral are being made. So, do you remember the difference between Margaret Thatcher and Ronald Reagan? Ronald Reagan wanted to rule the world and be loved and Margaret Thatcher only wanted to rule the world. Lord Tebbit (not the natural pin-up for your Pinko editors) said proudly in the House of Lords that, as party chairman, he was never asked by Baroness Thatcher to consult a focus group. So enough of talk and process, let's have decisive outcomes.

A NEW LOOK AT NUMBER NEEDED TO TREAT—OR LET'S TALK INTELLECTUAL

The number needed to treat (NNT) to prevent an important clinical outcome is a popular metric, widely used by policy makers and health economists and easily understood by clinicians and patients. However, as Samy Suissa points out ((*see page 540*) Hot Topic), deriving a NNT is not a straightforward matter when dealing with events that occur recurrently in patients followed-up over variable intervals. Using as an example the effect of inhaled corticosteroids on chronic obstructive pulmonary disease (COPD) lung attacks (or exacerbations if you must) and pneumonia, Samy outlines a method for doing this that relies on (deep breath) an approximation based on the relationship between the Poisson and exponential distributions. Readers might be surprised that the NNT to prevent a COPD lung attack derived this way is not dissimilar to that required to cause a case of pneumonia. The crucial point is that the NNT is an index of drug effect and is independent of the relative incidence of the outcome. Chris Cates (*see page 499*) provides a useful figure outlining the complex relationship between NNT and follow-up interval, which allows readers to get a better feel for this. In a nutshell, the number of patients having a COPD lung attack over 1 year is reduced from 47/100 to 42/100, and the number of patients having pneumonia is increased from 3/100 to 4/100. Not great, you might think, but what do you expect when you throw a potent immunomodulator at the airway mucosa that, in most cases, has a pattern of inflammation that God never intended to be steroid responsive.

YOU SAW IT HERE SECOND

Have another look at the front cover, and then at the CT scan. Work out the diagnosis that connects the two images and, for your *Thorax* bonus ball, what links the two with the American country singer Lyn Anderson. Too thorny a problem for you to solve (another subtle clue!)? Turn to *Images in Thorax*, (*see page 602*) for the diagnosis, and, for the musically challenged, to Google for Lyn Anderson.