What's hot that the other lot got

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LOBECTOMY ASSOCIATED WITH BETTER OUTCOMES IN ELDERLY PATIENTS WITH EARLY LUNG CANCER

Survival outcomes of three treatments used for early stage non-small cell lung cancer (NSCLC) was examined in this large, retrospective, population-based study (*JAMA Surg* 2014; doi: 10.1001/jama_surg.2014.556). The authors assessed data on 9093 patients who received definitive treatment with lobectomy, sublobar resection or stereotactic ablative radiotherapy (SABR) between 2003 and 2009. Median age of the patients was 75 years. 79.3% of patients underwent lobectomy, 16.5% had sublobar resections and 4.2% received SABR. After using propensity score matching analysis and proportional hazards regression, lobectomy was found to be associated with better overall survival and lung-specific survival when compared to sublobar resection despite the higher associated surgical risk. SABR was found to have comparable long-term survival outcomes with lobectomy. As such, the authors conclude that SABR may be a good alternative to surgery for patients with very advanced age and multiple co-morbidities.

LONG-TERM ERYTHROMYCIN AND RESPIRATORY MICROBIOTA IN BRONCHIECTASIS

In this study (*Lancet Respir Med* 2014; doi: 10.1016/S2213-2600(14)70213-9), gene sequencing of paired sputum samples, taken at baseline and at week 48, were analysed for 86 patients who had participated in a 12 month, double blind, placebo-controlled trial of twice daily 400 mg erythromycin in patients with non-cystic fibrosis bronchiectasis (BLESS trial). As expected, the change in microbiota composition was significantly greater with long-term erythromycin use than with placebo ($p=0.03$). However, the effect of erythromycin on the microbiome was dependant on the presence or absence of *Pseudomonas aeruginosa* as the dominant organism

detected in the baseline sample. No significant change in bacterial composition was seen when the baseline sample was dominated by *P. aeruginosa*. For samples with other dominant organisms, erythromycin significantly changed the microbiome, characterised by a reduced relative abundance of *Haemophilus influenzae* and an increased relative abundance of macrolide-tolerant pathogens including *P. aeruginosa*. Significant reduction in exacerbations also was only seen in patients with a *P. aeruginosa*-dominated baseline infection.

TREATING SLEEP APNOEA IN CARDIAC PATIENTS

Treating sleep apnoea effectively with positive airway pressure in patients diagnosed during hospital admissions for cardiac conditions was shown to significantly reduce 30-day hospital readmission and emergency department visit in this study (*J Clin Sleep Med* 2014;10:1051-9. doi: 10.5664/jcsm.4096). 104 patients who had been admitted for a cardiac cause and who had reported sleep apnoea symptoms underwent portable in-hospital sleep studies. 81 patients (78%) were diagnosed with sleep apnoea of which 65 patients (80%) had predominantly obstructive sleep apnoea and 16 patients (20%) had predominantly central sleep apnoea. Fifty patients were discharged home with continuous positive airway pressure (CPAP) machines including 5 patients with central sleep apnoea. Only 45.3% of the patients were fully compliant with CPAP usage and averaged better than minimum use, defined as use of 4 or more hours per night on a minimum of 21 days. In this group of patients, there was no hospital readmissions during the 30 day period post discharge. In comparison, 30% of the patients who had partial use and 29% of patients with no use of CPAP were readmitted within 30 days.

SHORTER DURATION OF TB TREATMENT UNSUCCESSFUL

In this multi-national study (*N Engl J Med* 2014;371:1577-87), moxifloxacin was substituted into current standard TB treatment to determine if it would facilitate a

shorter duration of treatment. This was a randomised, double-blind, placebo-controlled, non-inferiority phase 3 trial which divided 1931 newly diagnosed and previously untreated TB patients into 3 groups. The control group received standard treatment of isoniazid, rifampin, pyrazinamide and ethambutol for 8 weeks followed by isoniazid and rifampin for 18 weeks. In the second group, ethambutol was substituted with moxifloxacin and in the third group, isoniazid was substituted with moxifloxacin. In these two groups, moxifloxacin was given for 17 weeks followed by 9 weeks of placebo. In the groups where moxifloxacin was used, patients were found to have a more rapid decline in bacterial load and converted to culture-negative status quicker. However, the study was unable to demonstrate non-inferiority of the moxifloxacin-based regimens as the rate of relapse was found to be excessive after treatment was completed. 12 patients in the control group had relapsed within 18 months compared to 64 patients in the group where ethambutol was substituted and 46 patients where isoniazid was substituted with moxifloxacin.

LOW VITAMIN D LEVELS AND ASTHMA EXACERBATION

Further evidence linking vitamin D and asthma has been reported in this study (*Allergy* 2014; doi: 10.1111/all.12508). Researchers assessed the medical records of 307 900 patients who had vitamin D levels measured between 2008 and 2012. Among these, 21 237 patients had physician diagnosed asthma. From the data, no associations were found between having a low vitamin D level and the initial diagnosis of asthma. However, low levels of vitamin D was significantly associated with the number and severity of asthma exacerbations in confirmed asthma patients even after accounting for other risk factors. The study reported that asthmatics with low vitamin D levels were 25% more likely to have at least one exacerbation compared to those with normal vitamin D levels and that the lower the level, the greater the incidence of recurrent asthma attacks.

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