

## Masala

### *Statins prevent strokes in the elderly*

In a subset of participants from the Three-City study in France, researchers assessed the association between the use of lipid-lowering drugs (statin or fibrate) in older people (>65 years) without a history of vascular events and long-term risk of coronary heart disease and stroke. Of 7484 participants with a mean age of 73.9 years, 63% were women. After a mean follow-up of 9.1 years, users of lipid-lowering drugs were at decreased risk of stroke compared with non-users (hazard ratio [HR] 0.66); HRs for stroke were similar for statin and fibrate. No association was found between lipid-lowering drug use and coronary heart disease. These data encourage prescribing statins to older individuals (*BMJ* 2015;**350**:h2335).

### *Bystander cardiopulmonary resuscitation (CPR) improves survival*

Training in CPR was given to 3 million people in Sweden. The impact of this training on the frequency of bystander CPR and on survival following out-of-hospital cardiac arrests was assessed using data from 30 381 cardiac arrests. CPR was performed before the arrival of emergency medical services (EMS) in 15 512 cases (51.1%). The 30-day survival rate was 10.5% when CPR was performed before the arrival of EMS compared with 4% where CPR was not performed before the arrival of EMS ( $p < 0.001$ ). After adjusting for age, sex, location of cardiac arrest, cause of cardiac arrest, initial cardiac rhythm, EMS response time, time from collapse to call for EMS, and year of event, CPR was associated with an increased 30-day survival rate (OR 2.15) (*N Engl J Med* 2015;**372**:2307–15).

### *Insulin pump therapy reduces cardiovascular mortality*

In an observational study, data were obtained from the Swedish National Diabetes Register for the period 2005 to 2012. Of 18 168 people with type 1 diabetes, 2441 had used continuous subcutaneous insulin (insulin pump) therapy and 15 727 used multiple daily insulin injections. After a mean follow-up of 6.8 years, with multiple daily injections as reference, the adjusted hazard ratios for insulin pump treatment were 0.55 for fatal coronary heart disease, 0.58 for fatal cardiovascular disease and 0.73 for all-cause mortality. This study provides evidence of a lowering of clinically relevant cardiovascular outcomes with insulin pump therapy (*BMJ* 2015;**350**:h3234).

### *Serum cancer antigen 125 (CA-125) velocity better than single values for detecting ovarian carcinoma*

The United Kingdom Collaborative Trial of Ovarian Cancer Screening (UKCTOCS) used a multimodal strategy (MMS) based on annual CA-125 levels to interpret cancer risk using an algorithm. This was compared to the usual strategy of using a single screening value of CA-125. A total of 46 237 women, 50 years or older were screened using MMS. After 296 911 women-years of annual incidence screening, 640 women underwent surgery. Of those, 133 had primary invasive epithelial ovarian or tubal cancers (iEOCs). The sensitivity and specificity of MMS for detection of iEOCs were 85.8% and 99.8%, respectively. MMS alone detected 87.1% (135 of 155) of the iEOCs. Using fixed CA-125 cut-offs at the last annual screen of >35, >30, and >22 U/ml would have identified

41.3%, 48.4%, and 66.5% of iEOCs, respectively. Screening using MMS doubled the number of screen-detected iEOCs compared with a fixed cut-off (*J Clin Oncol* 2015; doi 10.1200/JCO.2014.59.4945. Epub 11 May 2015).

### *Old is Gold!*

Two nested, case-control studies in the UK used data from the Clinical Practice Research Datalink and QResearch primary care database to investigate the association between use of combined oral contraceptives and risk of venous thromboembolism, taking the type of progestogen into account. Information was obtained for women 15–49 years of age with a first diagnosis of venous thromboembolism in 2001–13 with each being matched with up to 5 controls. A total of 10 562 cases of venous thromboembolism were analysed. Current exposure to any combined oral contraceptive was associated with an increased risk of venous thromboembolism (adjusted OR 2.97) compared with no exposure in the previous year. Corresponding risks associated with current exposure to newer progestogens were: desogestrel (4.28), gestodene (3.64), drospirenone (4.12) and cyproterone (4.2). These were significantly higher than those for older, second-generation contraceptives levonorgestrel (2.38) and norethisterone (2.56), and for norgestimate (2.53). Newer progestogens seem to be more dangerous than older ones (*BMJ* 2015;**350**:h2135).

### *Digoxin associated with increased mortality*

Researchers in Germany did a meta-analysis to assess the effect of use of digoxin on all-cause mortality. They found 19 articles published between 1993 and 2014, addressing the effects of digoxin on all-cause mortality in subjects with atrial fibrillation (AF) or congestive heart failure (CHF). Based on the results of all 19 studies comprising 326 426 patients, digoxin use was associated with an increased relative risk of all-cause mortality (hazard ratio 1.21). It was associated with a 29% increased risk in patients with AF and a 14% increased risk in patients with CHF. It is time to reconsider the use of digoxin in clinical practice (*Eur Heart J* 2015. doi:10.1093/eurheartj/ehv143 Epub 4 May 2015).

### *Low-dose CT screening for carcinoma lung*

DANTE (Detection And screening of early lung cancer with Novel imaging TEchnology) was a randomized trial that compared lung cancer mortality following low-dose CT (LDCT) screening versus routine care. Men who smoked and were 60 to 74 years of age with a 20 pack-years or more history of smoking had a baseline chest X-ray and sputum cytology examination. They were then randomized to either a baseline and four annual screening rounds with LDCT ( $n=1264$ ) or a yearly clinical review ( $n=1186$ ). At a median follow-up of 8.35 years, 104 patients (8.23%) were diagnosed with lung cancer in the screening arm (66 by CT), 47 of whom (3.71%) had stage I disease; 72 control patients (6.07%) were diagnosed with lung cancer, with 16 (1.35%) being stage I. Lung cancer mortality was 543 per 100 000 person-years in the LDCT arm and 544 per 100 000 person-years in the control arm. In contrast to the results of the National Lung Screening trial (*N Engl J Med* 2011;**365**:395–409), which found a 20% reduction in lung cancer mortality using LDCT screening, this study questions the use of LDCT (*Am J Respir Crit Care Med* 2015;**191**:1166–75).