

## Beta blockers offer best chance of increased survival following a heart attack

The risk of death after a heart attack is lower than previously thought, and more widespread prescription of beta blockers could further improve survival rates, according to new research (Gitsels et al, 2017).

A large cohort study calculated the chances of survival after acute myocardial infarction in the general population aged 60 years and over in the UK. It also looked at the effectiveness of prescription of statins, aspirin, angiotensin-converting enzyme inhibitors and beta blockers (the most common treatments), as well as coronary artery bypass graft and percutaneous coronary intervention.

The study found that the life expectancy of people who have had at least one heart attack by the age of 60 years was, on average, lowered by 6–6.5 years. People who had suffered a heart attack by the age of 75 years had their life expectancy decreased by 4–5 years on average.

The greatest survival benefit was associated with prescription of statins, with an average increase in life expectancy of 2.5 years. Similarly, prescription of beta blockers was



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associated with an average increase in life expectancy of 2.0 years.

In contrast, prescription of aspirin and angiotensin-converting enzyme inhibitors was of no benefit in respect to life expectancy. The effectiveness of treatments with respect to life expectancy did not differ by age.

The study also highlighted possible gender discrimination when offering surgery. Miss Lisanne Gitsels, from the School

of Computing Sciences, University of East Anglia, Norwich, said: 'While men and women were equally likely to be prescribed drugs, men were approximately twice as likely to have had coronary artery bypass surgery or percutaneous coronary intervention. The gender difference could not be explained by difference in demographic and risk profiles, suggesting that there might be a gender discrimination in surgery, which is something which should be investigated further.'

Gitsels LA, Kulinskaya E, Steel N (2017) Survival prospects after acute myocardial infarction in the UK: a matched cohort study 1987–2011. *BMJ Open* 7: e013570. doi:10.1136/bmjopen-2016-013570

## In-utero magnetic resonance imaging improves diagnostic accuracy for fetal brain anomalies

A multicentre, prospective, cohort study was performed at 16 fetal medicine centres in the UK, of pregnant women aged 16 years or older whose fetus had a brain abnormality detected by ultrasound at a gestational age of 18 weeks or more (Griffiths et al, 2017). These women had in-utero magnetic resonance imaging within 14 days of ultrasound.

The cohort was subdivided by gestation into the 18 weeks to less than 24 weeks fetus cohort ( $n=369$ ) and into the 24 weeks or older fetus cohort ( $n=201$ ).

In-utero magnetic resonance imaging provided additional diagnostic information in 387 (49%) of 783 cases, changed prognostic

information in at least 157 (20%), and led to changes in clinical management in more than one in three cases. In-utero magnetic resonance imaging also had high patient acceptability. The authors propose that any fetus with a suspected brain abnormality on ultrasound should have in-utero magnetic resonance imaging to better inform counselling and management decisions.

Griffiths PD, Bradburn M, Campbell MJ et al; MERIDIAN collaborative group (2017) Use of MRI in the diagnosis of fetal brain abnormalities in utero (MERIDIAN): a multicentre, prospective cohort study. *Lancet* 389(10068): 538–546. [https://doi.org/10.1016/S0140-6736\(16\)31723-8](https://doi.org/10.1016/S0140-6736(16)31723-8)

## Giving palivizumab to preterm babies may reduce wheeze later

A multicentre case-control study of 444 Japanese infants born at 33–35 weeks' gestation (Mochizuki et al, 2017) was undertaken to test the effect of respiratory syncytial virus infection on development of subsequent atopic asthma. The primary goal of the study was to determine if palivizumab prophylaxis would prevent the onset of atopic asthma. The drug did not, but it did significantly reduce physician-diagnosed recurrent wheezing up to 6 years of age.

Infants who received at least three doses of palivizumab according to standard medical practice had about half the incidence of physician-diagnosed wheeze by 6 years of age compared to those who did not receive the drug (15.3% vs 31.6%).

Mochizuki H, Kusuda S, Okada K, Yoshihara S, Furuya H, Simões EA (2017) Palivizumab prophylaxis in preterm infants and subsequent recurrent wheezing: 6 year follow up study. *Am J Respir Crit Care Med* <https://doi.org/10.1164/rccm.201609-18120C>

## Screening for hepatocellular carcinoma in patients with cirrhosis is cost-effective

Hepatocellular carcinoma is the leading cause of death in patients with cirrhosis. A cost-effectiveness analysis in France and the United States (<https://doi.org/10.1002/hep.28961>) indicates that following screening guidelines for hepatocellular carcinoma in cirrhotic patients is lifesaving and cost-effective compared with 'real life' monitoring.

Following the guidelines for screening – which recommend biannual ultrasound – increased life expectancy by an average of 5 months and was cost-effective at \$1754 per additional life year gained with French costs and at \$32 415 per additional life year gained with US costs.