

### Follow-on treatment in postmenopausal women with breast cancer only necessary for 2 years

Standard treatment for postmenopausal breast cancer is to give adjuvant endocrine therapy for 5 years following surgical removal of the tumour. A study by the Austrian Breast & Colorectal Cancer Study Group showed that 2 years of subsequent follow-on treatment with anastrozole is sufficient. Further extension of anastrozole treatment to 5 years does not improve the outcome but can worsen side effects.

A total of 3484 postmenopausal breast cancer patients took part in the study. Participants had an early hormone-receptor-positive breast cancer (stage I–III) and, after 5 years of standard adjuvant anti-hormone therapy, received an additional 2 or 5 years of anastrozole.

‘We discovered that 2 years on an aromatase inhibitor following endocrine therapy are sufficient and that prolonging the treatment offers no benefit but increases side effects,’ says Professor Michael Gnant, coordinating investigator for the study, Head of the Department of Surgery of MedUni Vienna and Vienna General Hospital, and Deputy Head of the Comprehensive Cancer Center.

### Deaths during childbirth reduced by half since 1993

The latest report by the MBRRACE-UK collaboration ([www.npeu.ox.ac.uk/MBRRACE-UK](http://www.npeu.ox.ac.uk/MBRRACE-UK)) has found that the rate of term, singleton, intrapartum stillbirth and intrapartum-related neonatal death has more than halved since 1993, representing a reduction of around 220 intrapartum deaths per year.

Capacity issues were identified as a problem in over a quarter of cases undergoing panel review, the majority of which were related to the delivery suite. The panel consensus was that in nearly 80% of deaths improvements in care were identified which may have made a difference to the outcome for the baby.

## Role for virtual reality in reducing anxiety for people with cystic fibrosis

People who have cystic fibrosis are often treated in isolation because of the threat of infection, but this can cause them to experience anxiety, breathlessness



and pain. A media company, Orchard, has been working with the All Wales Adult Cystic Fibrosis Centre, based at University Hospital Llandough, part of Cardiff and Vale University Health Board, to develop a distraction therapy virtual reality project – where patients put on the goggles and immerse themselves in a whole new virtual world, reducing the anxiety they often feel.

The 360° films include watching animals in the wild (see above), and there is a cycling film to encourage patients to exercise, which can have a very positive effect on treatment.

Dr Jamie Duckers, consultant in cystic fibrosis at the Centre said: ‘Our patients have an inherited lifelong, life-limiting condition with a heavy treatment burden. Orchard came to us with this alternative, virtual reality way to treat our patients, and they’ve really bought into it. We believe this treatment has never been used in this way before, and in trials so far some 75% of patients have recorded

reduced anxiety and breathlessness levels. We’ll be championing this Welsh initiative to the cystic fibrosis world.’

He continued:

‘Owing to cross infection concerns our patients with cystic fibrosis cannot mix with each other face to face. We have started making a virtual tour of our cystic fibrosis centre for patients due to transition from paediatrics as it is not always possible for them to visit because of these cross infection concerns. This transition virtual reality will be shown to them in their paediatric clinic as part of the transition process and we hope that it will reduce the anxiety that patients and their families often experience during the transition to adult services.’

The development does not just benefit patients in this way, however, as Dr Duckers explained: ‘As patients can’t exercise with each other we are also developing a virtual exercise program in conjunction with Swansea University to allow patients to compete with each other “virtually” and we hope this will help to motivate patients to exercise which is an important part of the management of their cystic fibrosis.’

## Outpatient activity report shows nearly 5% increase in outpatient appointments in England in 2016–17

*Hospital Outpatient Activity 2016–17* describes NHS-funded outpatient activity in England in 2016–17 (<http://digital.nhs.uk/media/34240/Hospital-Outpatient-Activity-2016-17-Summary-Report/pdf/hosp-epis-stat-outp-summ-repo-2016-17-rep>). It does not examine statistics relating to admitted patient care episodes or attendances at emergency departments. The data are taken from the Hospital Episodes Statistics data.

In 2016–17, there were 118.6 million outpatient appointments (an increase of nearly 5% from the 2015–16 figures), of which 93.9 million were attended by patients (up by

just over 5% from 2015–16).

The number of outpatient appointments has nearly doubled since 2006–7, rising from 63.2 million to 118.6 million in 2016–17. The number of attended appointments has also risen significantly, from 51.9 million in 2006–7 to 93.9 million in 2016–17.

However, attendances as a proportion of total appointments have decreased over the period from 82.2% in 2006–7 to 79.2% in 2016–17. Reasons for non-attendance were quite evenly split between did not attend, patient cancellations and hospital cancellations.

## Machine assessment could increase number of usable kidneys from circulatory death donors



**Dr Sarah Hosgood, Senior Research Associate, Department of Surgery, University of Cambridge, Addenbrooke's Hospital, Cambridge**

Many deceased donor kidneys are declined for transplantation because of concerns over their quality, but a study has found that normothermic machine perfusion can assess the quality of a kidney and determine its suitability for transplantation (Hosgood et al, 2017).

In phase 1 of this study, declined kidneys which were donated after circulatory death underwent normothermic machine perfusion assessment for 60 minutes. Kidneys were graded 1–5 using a quality assessment score based on macroscopic perfusion, renal blood flow and urine output during normothermic machine perfusion. In phase 2 of the study, declined kidneys which were donated after circulatory death were assessed by normothermic machine perfusion with an intention to transplant them.

In phase 1, 18 of 42 declined kidneys which were donated after circulatory death

were declined owing to poor in situ perfusion. After normothermic machine perfusion, 28 kidneys had a quality assessment score of 1–3, and were considered suitable for transplantation. In phase 2, ten of 55 declined kidneys which were donated after circulatory death underwent assessment by normothermic machine perfusion. Eight kidneys had been declined because of poor in situ flushing in the donor and five of these were transplanted successfully. Four of the five kidneys had initial graft function.

Commenting on the findings, Dr Sarah Hosgood, Senior Research Associate, Department of Surgery, University of Cambridge, Addenbrooke's Hospital, Cambridge, said: 'Normothermic perfusion is a new technology that allows a clinician to make a functional assessment of a kidney prior to transplantation. We have used this technology to successfully transplant kidneys that had been deemed unsuitable for transplantation. This has the potential to increase the number of kidney transplants in the UK.'

Hosgood SA, Thompson E, Moore T, Wilson CH, Nicholson ML (2017) Normothermic machine perfusion for the assessment and transplantation of declined human kidneys from donation after circulatory death donors. *Br J Surg* <https://doi.org/10.1002/bjs.10733>

## People born prematurely have smaller airways causing respiratory problems

People born prematurely may have smaller airways than those born at full term, which can cause respiratory problems, according to new research (Duke et al, 2017).

It is known that cardiovascular and respiratory system function is affected by premature birth, but the exact causes are still not completely known. Research suggests that the impaired respiratory function in those born prematurely could be the result of them having smaller airways.

The study looked at adults who were born prematurely (8 or more weeks early) and adults who were born at full term and the same age and height as those individuals in the premature group. The researchers measured the lung function of all participants at rest and during exercise. Using information from the

resting lung function tests, they calculated an estimate of airway size for both premature and full term groups. The estimate of airway size was smaller in the premature group compared to the full term group.

Dr JW Duke, an author of the study, said, 'our study might suggest that respiratory treatments would be less effective in individuals born prematurely, but more work needs to be done to directly test this.'

He added: 'Our work used only an estimate of airway size and future research should use precise measurements to try and obtain an actual airway size, rather than an estimate.'

Duke JW, Gladstone IM, Sheel AW, Lovering AT (2017) Premature birth affects the degree of airway dysanapsis and mechanical ventilatory constraints. *Exp Physiol* <https://doi.org/10.1113/EP086588>

### Guideline on the management of recurrent pregnancy loss

The European Society of Human Reproduction and Embryology has published a new guideline outlining the best available evidence for investigation and treatment of women with recurrent pregnancy loss ([www.eshre.eu/~media/sitecore-files/Guidelines/Recurrent-pregnancy-loss/ESHRE-RPL-Guideline\\_28112017\\_FINAL.pdf](http://www.eshre.eu/~media/sitecore-files/Guidelines/Recurrent-pregnancy-loss/ESHRE-RPL-Guideline_28112017_FINAL.pdf)).

### Mental health statistics annual report includes information on children for first time

A breakdown of statistics on young people who have been referred for treatment or assessment with mental health services in England has been published by NHS Digital (<http://digital.nhs.uk/catalogue/PUB30160>).

### Factors affecting quality of life in older people with cancer

A new study provides insights into factors that affect health-related quality of life in older adults with cancer (<https://doi.org/10.1002/cncr.31048>). The most important contributors associated with worse physical and mental quality of life included more severe symptoms of pain, fatigue, and disturbed sleep. Also important were factors related to support needs, such as needing help when fatigued. Other contributors included the need for emotional support and financial hardship.

## Good staff management by trusts leads to lower staff absence and more satisfied patients

A report from the What Works Centre for Wellbeing ([www.whatworkswellbeing.org/product/good-work-wellbeing-and-changes-in-performance-outcomes/](http://www.whatworkswellbeing.org/product/good-work-wellbeing-and-changes-in-performance-outcomes/)) found that trusts that made the most extensive use of good people management practices were over three times more likely to have the lowest levels of staff sickness absence and at least four times more likely to have the most satisfied patients.

They were also more than twice as likely to have staff with the highest levels of job satisfaction compared to NHS trusts that made least use of these practices, and over three times more likely to have staff with the highest levels of engagement.

Dr Chidiebere Ogbonnaya and Professor Kevin Daniels, of UEA's Norwich Business School, found that trusts that most used good people management practices had sickness absence rates of around 3.7%, whereas trusts that used these least had absence rates around 4.4%. They estimate that if all trusts reduced their absence rates to 3.7%, this could save the NHS over £200 million a year in sick pay.

## The burden of liver disease in the UK: the crisis we can not afford

The fourth report of the Lancet Standing Commission on Liver Disease in the UK warns that the UK liver disease burden is continuing to rise, blighting the poorest groups and lowering economic productivity (Williams et al, 2017).

Experts argue that insufficient measures are being taken to control the main lifestyle risk factors driving this burden of largely preventable disease, namely alcohol consumption, obesity and viral hepatitis.

Figures show that death rates from liver disease are higher among middle-aged and lower income groups and the report indicates that liver disease is set to overtake ischaemic heart disease as the leading cause of premature mortality in the next 2 years.

Liver disease is a notoriously silent killer – three quarter of cases are only diagnosed at a late stage when treatment options are limited. The UK needs urgently to improve the early detection of liver disease and the Commission highlights the most useful blood tests for use



**Professor Roger Williams, Director, Institute of Hepatology London, Foundation for Liver Research; Professor of Hepatology, King's College London, London**

in primary care. It also strongly recommends the introduction of transient elastography in the community setting.

Commenting on the report, Professor Roger Williams, Chairman of the Commission, and Professor of Hepatology, King's College London, London, said: 'For too long the diagnosis and care of patients with liver disease has been hampered by the stigma associated with the illness but the reality now is that this is not a disease of the few but of wide sections

of the population. Doctors, health care workers, the general public, government – we cannot stand by and allow this disease burden to grow unchecked when we can take action now to improve the nation's health.'

Williams R, Alexander G, Armstrong I et al (2017) Disease burden and costs from excess alcohol consumption, obesity, and viral hepatitis: fourth report of the Lancet Standing Commission on Liver Disease in the UK. *Lancet* [https://doi.org/10.1016/S0140-6736\(17\)32866-0](https://doi.org/10.1016/S0140-6736(17)32866-0)

## Online patient information too complicated for intended recipients

Researchers have compared the readability of online living donor recipient materials *vs* deceased donor recipient materials (Zhou et al, 2017).

The internet has extensive resources for kidney transplantation recipients, but in America half of the population reads below a seventh-grade level. Previous studies showed that living donor recipients have higher health literacy rates than deceased donor recipients.

The top 10 websites for live donor and deceased donor kidney transplantation were analysed using eight readability scales. USA reading grade level was determined for each site. Overall, the mean reading level for the living donor materials was 12.54 (range 9.2–17) and for the deceased donor materials was 12.87 (range 8.7–17,

$P=0.73$ ), corresponding to a university level. None of the sites met the seventh-grade level recommended by the National Institute of Health.

The readability of online materials is too high for the corresponding health literacy rates among patients requiring a kidney transplant. This may affect decision making, contributing to a smaller proportion of patients of a lower socioeconomic status and those with poor English language skills pursuing live donor organs.

Talking about the findings, Dr Eric Zhou, Rhode Island Hospital and Warren Alpert Medical School of Brown University, Providence, Rhode Island, USA, said: 'This study highlights the discrepancy between the readability of available materials out there for patients and the actual health

literacy of the patient demographic. As a result patients may seek more "readable" websites such as online forums, which often contain medically inaccurate information. Patient understanding is essential especially in kidney transplantation, where a patient's overall outcome may be affected depending on whether they receive a live *vs* a deceased donor organ.'

He continued: 'Readability of patient material is relevant to many areas across specialities from lung cancer to diabetes. It is essential to tailor patient education materials to a more appropriate level.'

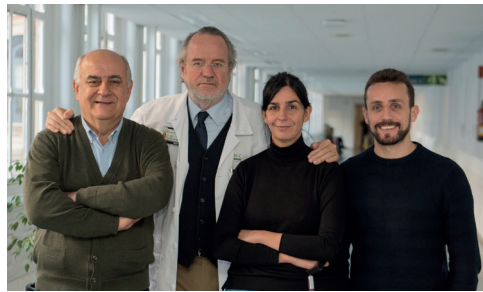
Zhou EP, Kiwanuka E, Morrissey PE (2017) Online patient resources for deceased donor and live donor kidney recipients: a comparative analysis of readability. *Clinical Kidney Journal* *sfx129* <https://doi.org/10.1093/cjk/sfx129>

## Lung function in early adulthood and health in later life: a transgenerational cohort analysis

Early life events can affect health in later life. A team from Barcelona hypothesized that low lung function (forced expiratory volume in 1 second (FEV<sub>1</sub>) <80% predicted) in early adulthood (25–40 years) is associated with higher prevalence and earlier incidence of respiratory, cardiovascular and metabolic abnormalities, and premature death (Agustí et al, 2017).

A cohort analysis tested this hypothesis using data from the Framingham Offspring Cohort (FOC). The observations were validated in an independent cohort and another group which included the direct descendants of FOC participants. These general population cohorts were regularly and prospectively followed up to collect extensive clinical, physiological, biological and imaging information. The main outcomes were prevalence (in early adulthood) and incidence (during follow-up) of comorbidity, and all-cause mortality.

The researchers found that 10%, 13% and 4% of the three cohorts had FEV<sub>1</sub> <80% predicted at the age of 25–40 years. These individuals also had higher prevalence of respiratory, cardiovascular and metabolic abnormalities in early adulthood, higher



**Professor J Brugada, Dr A Agustí, Dr R Faner, Dr G Noell, Institut d'Investigacions Biomèdiques August Pi i Sunyer-Fundació Privada Clínic de Barcelona, Barcelona, Spain**

and earlier (about a decade) incidence of comorbidities during follow-up, and higher all-cause mortality than individuals with normal lung function in early adulthood.

The authors concluded that low peak lung function in early adulthood could identify a group of individuals at risk of early comorbidities and premature death.

Agustí A, Noell G, Brugada J, Faner R (2017) Lung function in early adulthood and health in later life: a transgenerational cohort analysis. *Lancet Respir Med* 5(12): 935–945. [https://doi.org/10.1016/S2213-2600\(17\)30434-4](https://doi.org/10.1016/S2213-2600(17)30434-4)

## High fructose consumption in pregnancy or early childhood may increase children's risk of asthma

Children between the ages of 7 and 9 years may be at greater risk for developing asthma if they consumed high amounts of fructose in early childhood or their mothers drank a lot of sugar-sweetened beverages while pregnant (Wright et al, 2017).

The researchers studied 1068 mother–child pairs participating in Project Viva. This is a longitudinal study based in Eastern Massachusetts designed to find ways to improve the health of mothers and their children.

Mothers in the highest quartile of sugar-sweetened beverage and fructose consumption during pregnancy were respectively 63% and 61% more likely than those in the lowest quartile to have mid-childhood-age children with asthma, when adjusted for pre-pregnancy body mass, age, race, ethnicity and other factors that may have affected results.

Children in the highest quartile of fructose consumption during their early childhoods were 64% more likely than those in the lowest quartile to have asthma in mid-childhood, when adjusted for maternal sugar-sweetened beverage consumption. This remained the same after adjusting for mid-childhood-age body mass. The difference between the top and bottom quartiles was about 44 vs 15 g per day of fructose.

The authors concluded that higher sugar sweetened beverage and fructose intake during pregnancy and in early childhood may influence childhood asthma development, in part through mechanisms apart from adiposity.

Wright LS, Rifas-Shiman SL, Oken E, Litonjua AA, Gold DR (2017) Prenatal and early-life fructose, fructose-containing beverages, and mid-childhood asthma. *Ann Am Thorac Soc* <https://doi.org/10.1513/AnnalsATS.201707-5300C>

## Overweight and obesity reduce the likelihood of sustained remission in early rheumatoid arthritis

Obesity is implicated in the development, severity, outcomes and treatment response to rheumatoid arthritis. Researchers have estimated the independent effects of overweight and obesity on ability to achieve sustained remission in the 3 years following diagnosis of rheumatoid arthritis (Schulman et al, 2017).

Data were from the Canadian Early Arthritis Cohort, a multicentre observational trial of early rheumatoid arthritis patients treated using guideline-based care. Sustained remission was defined as DAS28 <2.6 for two consecutive visits. Patients were stratified by body mass index (healthy – 18.5–24.9 m/kg<sup>2</sup>, overweight – 25–29.9 m/kg<sup>2</sup> and obese – ≥30 m/kg<sup>2</sup>).

Rates of overweight and obesity were high (69%) in this cohort. Overweight patients were 25% and obese patients 47% less likely to achieve sustained remission in the first 3 years despite similar drug treatment. This study supports better identification and management of this risk in patients with rheumatoid arthritis.

'These findings have important implications for clinical care since rates of overweight and obesity continue to rise,' said author Dr Susan Goodman of the Hospital for Special Surgery and Weill Cornell Medical School, New York, USA. 'Our findings highlight the high proportion of newly diagnosed rheumatoid arthritis patients who are overweight or obese and who may have disease that is harder to treat. For people with rheumatoid arthritis who haven't had an adequate response to treatment, this may be another factor to consider.'

Schulman E, Bartlett SJ, Schieir O et al; CATCH Investigators (2017) Overweight and obesity reduce the likelihood of achieving sustained remission in early rheumatoid arthritis: results from the Canadian Early Arthritis Cohort Study. *Arthritis Care Res (Hoboken)* <https://doi.org/10.1002/acr.23457>