
Case Notes

News · Case Studies · Insights

From Royal Brompton & Harefield Hospitals · London

Winter/Spring 2019



RB&HH
SPECIALIST CARE

Welcome to the Winter/Spring 2019 edition of *Case Notes*



David Shrimpton
*Managing Director,
RB&HH Specialist Care*

At Royal Brompton & Harefield Hospitals Specialist Care, private patients can access the highest quality diagnostics, treatment and care for heart and lung conditions.

We are based in three convenient London locations – Royal Brompton Hospital in Chelsea, Harefield Hospital in Middlesex and 77 Wimpole Street in the Harley Street Medical Area.

I am delighted to share with you our latest news and a range of articles to showcase the knowledge and skills of our incredible team of expert consultants and specialists.

Dr Sabine Ernst shares how the latest 3D mapping techniques offer arrhythmia treatment with zero radiation on page 15.

Furthermore, discover the latest news about treatments for lung cancer and emphysema on pages 6 and 10.

If you have any questions about our services, or you would like to refer a patient, please get in touch – we would be delighted to hear from you.

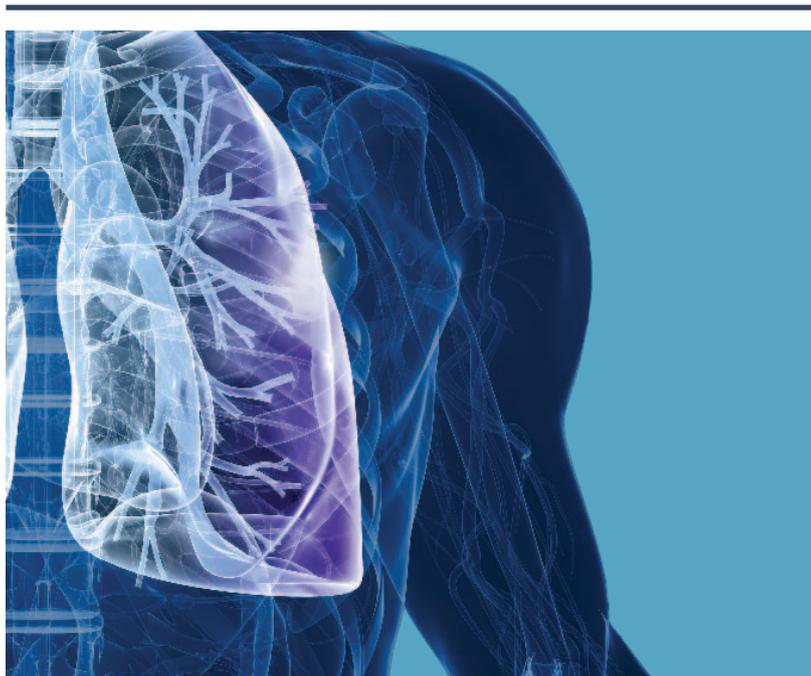
Contact us

privatepatients@rbht.nhs.uk
www.rbhh-specialistcare.co.uk

RB&HH
SPECIALIST CARE



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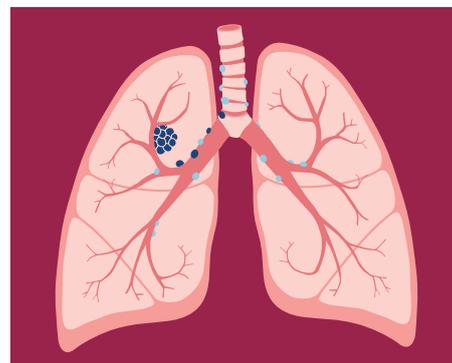
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What's new

Seven new professors at RB&HH Specialist Care

We would like to congratulate seven of our consultants who have been promoted from doctor to professor by Imperial College London.

Our consultants provide the highest standard of care to private patients. They are not only experts in their clinical specialism, but they are also academics who spend time researching new and better treatments, and passing on their knowledge to others.



Professor Piers Daubeney
Consultant paediatric and fetal cardiologist



Professor Eric Lim
Consultant thoracic surgeon



Professor Michael Loebinger
Consultant respiratory physician



Professor Andrew Menzies-Gow
Consultant in respiratory medicine



Professor Darryl Shore
Consultant cardiac surgeon



Professor Susanna Price
Consultant cardiologist and intensivist



Professor Robert Wilson
Consultant physician in respiratory medicine

Clinical observers from Kuwait

RB&HH Specialist Care offers intensive clinical training programmes to physicians wishing to further develop their expertise in certain interventional specialties.

We recently welcomed two consultants from Kuwait, Dr Aliah Khesroh and Dr Faisal Al Roumi, for a two-month clinical observership at Royal Brompton Hospital.

The consultants had a wonderful experience on their tailored education and training programme, as they spent time working at the cardiovascular magnetic resonance unit and with the adult congenital heart disease teams.



David Shrimpton and Ruku Bibi from RB&HH Specialist Care meet Dr Aliah Khesroh (second from left) and Dr Faisal Al Roumi (far right)



Mr Toufan Bahrami in surgical theatre

3-in-1 keyhole operation transforms lives of heart patients

Thousands of patients who suffer from multiple life-threatening heart problems are to be offered 'three-in-one' surgery – three major procedures carried out during a single keyhole operation. The breakthrough means that people can avoid open-heart surgery and is expected to slash recovery time from several months to two to three weeks.



Mr Toufan Bahrami
Consultant cardiac surgeon

Instead of a large incision, the heart is accessed via a handful of small cuts. A high-tech camera guides surgeons' intricate movements. The technique is being used to simultaneously perform heart-bypass surgery, and also to repair two failing heart valves.

Mr Vivian Ellis was one of the first to undergo this heart procedure, which is being pioneered at Royal Brompton and Harefield hospitals. He needed two leaking valves repaired, and a bypass to combat blocked arteries. Mr Ellis was referred to Mr Toufan Bahrami, a leading cardiac surgeon at Harefield Hospital.

Mr Ellis said: "I was out of hospital in a week with very little pain and felt like I'd made a full recovery just two weeks afterwards."

"A month after the operation, you could hardly see the incision holes. Now you would struggle to find them at all."

Leaders in collaboration

RB&HH Specialist Care have opened our doors to select external physicians through our practising privileges policy.

Approved consultants and GPs – who are not usually based at our hospitals – have been welcomed to treat patients at our three sites. This includes:

- consultants who hold honorary contracts with our hospitals (either cardiothoracic or other specialties)
- consultants recommended by our consultants, from specialties where heart and/or lung conditions are associated as a side effect
- GPs with a specialist interest in cardiology or respiratory conditions, and who have an existing practice and an excellent reputation.

This enables a wider range of patients to access our excellent facilities and diagnostic services, with cardiology and respiratory experts available at the same convenient London location.



77 Wimpole Street – RB&HH Specialist Care's outpatient and diagnostic facility

To find out more, contact our helpful customer services team: call +44 (0)20 3131 0535 or email privatepatients@rbht.nhs.uk

World-class facilities

Patients from around the world regularly travel to London to receive expert care and treatment from Royal Brompton & Harefield Hospitals Specialist Care, at our three convenient locations.

Each site features smart and comfortable facilities for patients and their relatives, in an environment well suited to their needs.



77 Wimpole Street

Based in the renowned Harley Street Medical Area, our Wimpole Street facility is our central hub offering outpatient and diagnostic care for patients with heart and lung conditions. In addition, we offer practising privileges to other physicians and physiotherapists, who are not normally based at Royal Brompton and Harefield hospitals.

The building blends historic and modern architecture, and has been completely refurbished to a high specification, with smart patient waiting areas, spacious consulting rooms and easy lift access.

Zohreh Palmer, general manager, ensures 77 Wimpole Street is a top location for patients. "Patient service is at the heart of our new facility. We have the leading cardiac and respiratory specialists working here and we are committed to delivering world-class care," Zohreh says.

Patients benefit from the convenience of having a consultation and multiple diagnostic tests scheduled on the same day, in the same location. The 'one-stop' approach removes the burden of having multiple appointments in different places with unnecessary travel.

We offer the following services for same-day or short-notice appointments:

- consultations for respiratory and cardiac conditions
- the latest imaging scans, including PET-CT, CT and MRI
- non-invasive cardiology including cardiac monitoring, exercise tolerance tests and ECG
- other diagnostic tests such as echocardiography, lung function and chest x-ray.

Contact information

Address

77 Wimpole Street, London, W1G 9RU

Opening hours

8am to 9pm, Monday to Friday

Diagnostic enquiries

+44 (0)20 7351 8186 (lines open 8am to 6pm)
rbh-tr.diagnosticwimpole@nhs.net



Harefield Hospital

As a centre of excellence, Harefield Hospital has offered expert heart and lung care for many years. It has a long history of treating international patients. In fact, it was originally established in 1915 to treat injured soldiers from Australia and New Zealand.

Professor Sir Magdi Yacoub established the largest heart and lung transplantation programme in the world at Harefield Hospital.

The current hospital building is a late Art Deco design, opened in 1937 by the Duke of Gloucester. Over the years, the hospital has increased in size and been completely refurbished with state-of-the-art facilities.

Harefield boasts new private inpatient and outpatient areas with diagnostic suites, overseen by Gerri Hamer, general manager for private patients.

“Everything we offer is based on the needs of our patients,” Gerri says. “We can arrange same-day or short-notice appointments with our respiratory and cardiac consultants. Our rapid diagnostics service offers MRI, echocardiography, CT, lung function and non-invasive tests.”

Juniper Ward is the dedicated private inpatient ward, offering 16 rooms with en-suite bathrooms.

“The rooms are very pleasant, and as they are all south-facing, patients can enjoy plenty of natural light, in the comfort of their own space,” Gerri says. “Harefield is unique, as it offers world-class care in a quiet and beautiful setting situated in the greenbelt of London.”

Contact information

Address

Harefield Hospital, Hill End Road, Harefield, UB9 6JH

Opening hours

8am to 9pm, Monday to Friday



Royal Brompton Hospital

Situated in Chelsea, Royal Brompton Hospital has been treating patients since the 1840s. In its first decades, kind benefactors supported the hospital including the Royal Family and the author Charles Dickens.

Royal patronage has continued and the main building, Sydney Wing, was opened in 1991 by Her Majesty The Queen. In the same year, the hospital was granted a Royal Charter.

Royal Brompton Hospital established Europe’s first adult cystic fibrosis clinic in 1964 and it has grown into the largest treatment centre for this condition in Europe.

The hospital has an international reputation for the treatment of lung disease – the result of over 170 years’ experience. We are also an international leader in the treatment of heart conditions, with large research trials leading to significant developments.

On the private Sir Reginald Wilson Ward, our dedicated staff care for cardiothoracic surgery patients, cardiology and respiratory patients in 29 rooms with en-suite bathrooms.

Fred Sendaula, service manager, says: “We have dedicated inpatient and outpatient facilities for private patients, with access to some of the most advanced diagnostic equipment and medical devices in the world.”

“The intensive care unit can provide ECMO (extracorporeal membrane oxygenation) for adults and children – one of only five severe acute ECMO centres in England.”

Contact information

Address

Royal Brompton Hospital, Sydney Street, London, SW3 6NP

Opening hours

8am to 9pm, Monday to Thursday, and 8am to 7pm on Friday

We offer private appointments with our heart and lung specialists at our three superb locations. Treatment can be funded by private medical insurance, sponsored by an embassy or company, or patients are welcome to self-fund. Contact us to make an enquiry or book an appointment on +44 (0)20 3131 0535 (lines open 9am–5pm) or email privatepatients@rbht.nhs.uk

Single port VATS lobectomy

– an alternative surgical approach

More than 46,000 people are diagnosed with lung cancer in the UK every year, making it the third most common type of cancer. Our experts continue to push the boundaries, developing less invasive treatments to successfully treat complex lung cancers.

At Royal Brompton & Harefield Hospitals Specialist Care, patients with tumours in the lung can be treated using less invasive surgical approaches. In recent years, there has been a shift towards offering patients keyhole surgery and smaller incisions with no rib spreading.

This approach is known as video-assisted thoracoscopic surgery (VATS) lobectomy. The experts at Royal Brompton Hospital believe the single port VATS lung resection technique allows for an even faster recovery and minimises complications, compared to conventional surgical approaches.

Because of the innovative treatment options offered at Royal Brompton and Harefield hospitals, patients who have been offered palliative treatments at their local hospital have sought a second opinion with us. Or, those patients who have been turned down for surgery elsewhere have had successful surgery at our hospitals.



Mr Simon Jordan
Consultant thoracic surgeon

Mr Jordan is an expert in adult and paediatric thoracic surgery. He specialises in minimally invasive single port VATS resection for lung cancer, lung volume reduction surgery for emphysema (COPD), airway stenting, primary and metastatic chest sarcoma.



We hope with screening and lower dose CT scans that early stage lung cancers will be identified.

Mr Simon Jordan

AT A GLANCE

PROCEDURE

VATS lobectomy

ROYAL BROMPTON HOSPITAL

Mr Simon Jordan
Professor Eric Lim
Miss Sofina Begum

HAREFIELD HOSPITAL

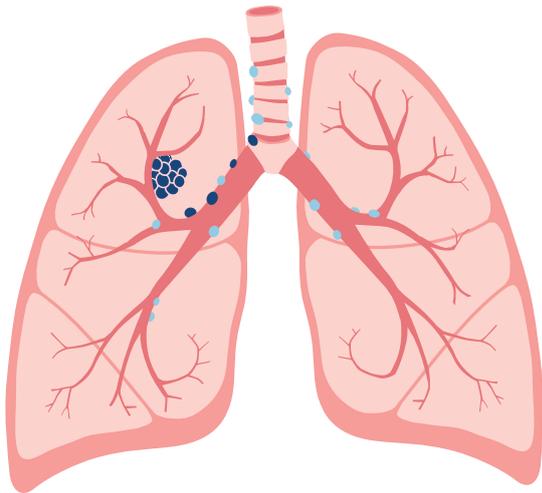
Ms Emma Beddow
Professor Vladimir Anikin
Mr Nizar Asadi

WHAT PROBLEM DOES IT SOLVE

The length of the incision is smaller compared to the conventional thoracotomy.

BENEFITS TO THE PATIENT

- Smaller incision and no rib spreading resulting in smaller, neat scars.
- Minimally invasive single port and multiport approaches heal very well.
- Post-operative pain is reduced and the recovery process is quicker.
- Most patients can return home after five to seven days.



▲ Right upper lobe tumour with limited ipsilateral lymph node disease noted by dark blue lymph nodes. Light blue nodes are free of tumour.

▼ Post-operative single port VATS scar



World-class expertise

The lung cancer team at Royal Brompton Hospital work collaboratively with specialist oncology colleagues based at The Royal Marsden Hospital, ensuring every option is explored when planning treatment. This multidisciplinary approach is a team effort combining the expertise of world leading specialists in their field.

Together the team provide their specialist knowledge in chemotherapy, radiotherapy and immunotherapy drugs and other treatment options. This allows for the best outcome for all patients.

If a patient requires surgery, the surgical team proceed without delay, backed up by the hospital's world class histopathology department. The expert team at Royal Brompton Hospital provide a world class service and techniques that other centres in the UK do not practice.

Single port approach versus a traditional thoracotomy

Compared to 10 years ago, the conventional posterolateral thoracotomy has been significantly modified. With the minimally invasive single port approach, the length of the incision is much smaller and rib spreading is completely avoided. Both single port and multiport approaches generally heal very well with smaller, neat scars.

Mr Simon Jordan, consultant thoracic surgeon, explains: "We have found the use of single port minimally invasive surgery reduces the amount of post operative pain and speeds up the recovery process. It also allows the patient to have a more rapid return home."

He continues, "Since this is a relatively new technique, the long-term benefits are still being investigated. However, this surgical approach is just as good as the conventional open chest surgery and probably confers benefit and allows more rapid recovery."

"If the tumour is very big, then a thoracotomy would be the best approach, but most tumours are amenable to the minimally invasive single port technique."

The risk of having a major complication is typically less than one per cent. Although this is a major surgery, most patients are up and about the next day.

Successful outcomes

A recent review by an independent body examined all UK centres performing lung cancer surgery. The results concluded that Royal Brompton and Harefield hospitals have the highest lung cancer resection rates, treating the highest risk cases. The results included the single port VATS lobectomy approach, as well as multiple VATS and thoracotomy surgery.

Despite treating such high risk cases, the two hospitals have achieved the best outcomes post-operatively and one year later. And when other patient risk factors and co-morbidities were taken into consideration, such as heart disease and heavy smoking history, then Royal Brompton and Harefield hospitals achieved the best one-year patient survival rates by far in the UK.

Lung cancer screenings

Increasingly, organised screening programmes or scans are picking up cancers, often at an earlier stage. Nationally and internationally, lung cancer screening is now widely available and can allow for diagnosis of cancers when they are most treatable, and surgery has a chance to be more curative.

Currently, more than two-thirds of lung cancers are diagnosed at a late stage, so survival rates for these patients are low.

Mr Jordan explains, "Historically we have recognised that only 10 to 20 per cent of lung cancers are surgically treatable or curable at diagnosis; this is typically following the development of symptoms."

"But we hope with screening and lower dose CT scans that early stage lung cancers will be identified – even before symptoms develop."

Our specialists run lung cancer screening clinics at both hospitals. The service is led by some of the UK's leading specialists in respiratory medicine. The knowledge and expertise of our specialists and their teams are available to anyone with concerns about the risk of lung cancer.

To book a consultation or to refer a patient for a lung cancer screening, please contact the customer services team on +44 (0)20 3131 0535

A warm welcome

Royal Brompton & Harefield Hospitals Specialist Care provides world-class care to patients from across the globe.



Afnan Hashem and Hanaa Abou Mussaid, international patient coordinators, at Sir Reginald Wilson Ward

International patients receive first class care and treatment at our three London locations: Royal Brompton Hospital, Harefield Hospital, and 77 Wimpole Street – our dedicated outpatients and diagnostics facility.

We recognise that being away from home in a different environment can be worrying and stressful. That's why we take extra care to ensure that international patients and their families are well looked after.

Bespoke support and interpretation

Our dedicated team of international patient coordinators are fluent in Arabic, and help ensure that the patient's cultural, religious and language needs are met. If other languages are required, we make sure that a professional interpreter is present.

Afnan Hashem, international patient manager, heads up the team.

"We know that patients come a long way from their home country. We try to make them feel like they are at home," she says.

"We take responsibility for them – like it's a new member of the family who has joined us. If there are any problems, they can depend on us to sort it out."

"You are more than just a patient at hospital. We know that language is a barrier, that culture is a barrier. Communication is not going to be easy or straightforward. Leave that burden to us, so that you can focus on your health."

Afnan regularly liaises with embassies and international contacts, and advises on referrals – such as which consultant is most appropriate for a patient's needs. She can also support with arranging appointments and admission to the hospital.

Inpatient facilities

Inpatients are accommodated in private facilities within the main hospital buildings. The private patients' wards – Sir Reginald Wilson Ward at Royal Brompton, and Juniper Ward at Harefield – feature spacious single rooms with en-suite bathrooms.

Private patients enjoy freshly prepared meals from the dedicated catering service at the hospitals. The menu is translated into Arabic, and always includes vegetarian and heart-healthy options to choose from. We are pleased to provide Halal and Kosher meals, and will cater to special requests whenever we can.

Every day, we offer patients a complimentary newspaper, including a range of international titles. Each patient has their own television, with UK and international channels to choose from.

Support for loved ones

We know how important it is for patients to have their relatives close by. Visitors benefit from generous visiting times and comfortable waiting areas with free refreshments.

“Much of the signage on the wards is in both English and Arabic. This makes it easy for Arabic-speakers to find their way around,” Afnan says.

“For relatives of embassy-sponsored international patients receiving treatment at Harefield, we offer a complimentary daily return taxi service from central London to the hospital.”

With this service, relatives can enjoy the capital's hotels and amenities, yet quickly and easily visit their loved ones being treated at Harefield Hospital.

Spiritual care

At our hospitals, we are pleased to support the religious and spiritual needs of our patients, their relatives and friends. Our chaplaincy team can visit the ward to provide pastoral support and information, listen in confidentiality, pray if requested, or to arrange for the appropriate faith leader to visit.

Our multi-faith prayer rooms offer quiet spaces to pray or reflect at your own convenient time, with prayer mats and a male/female divider available. There is a chapel at each hospital, and weekly services and prayers are held for Christians or Muslims who wish to attend them.



Reception area at 77 Wimpole Street – RB&HH Specialist Care's outpatient and diagnostics facility



Gerri Hamer, general manager, greeting a patient at Harefield Hospital



For more information and to speak to our dedicated international patients team, please call +44 (0)20 7351 8471 or +44 (0)7483 338166 or email international@rbht.nhs.uk

A BURST OF STEAM TO RELIEVE EMPHYSEMA

Severe emphysema patients can receive a new lease of life, thanks to an innovative new vapor ablation treatment offered at Royal Brompton & Harefield Hospitals Specialist Care.

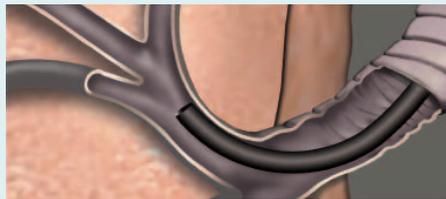
Emphysema is a progressive lung disease that can cause shortness of breath, coughing, fatigue and weight loss. It's a form of chronic obstructive pulmonary disease (COPD) which is responsible for 30,000 deaths annually in the UK.

Patients with emphysema have damaged alveoli (air sacs) in the lungs. Over time, the inner walls of the air sacs weaken and rupture, creating larger air spaces instead of many small ones. This reduces the surface area of the lungs and, in turn, the amount of oxygen that reaches the bloodstream.

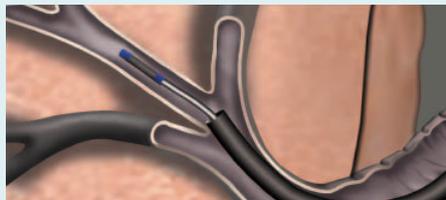
While there is no cure, treatment can help to manage symptoms. This may include guidance on smoking cessation, influenza vaccination, patient and carer education, pulmonary rehabilitation, exercise training and breathing retraining. Patients can also be prescribed inhaled or oral bronchodilators and steroids.

But for severe emphysema patients with more advanced disease, damage to the elastic tissue of the lungs causes them to become over-inflated, as the can't empty properly. Air becomes trapped making it much harder to breathe, with less room for fresh, oxygen-rich air to enter. Comprehensive treatment may be needed to reduce the over-inflation.

Thanks to recent advances, much of which was pioneered at Royal Brompton Hospital, patients can now benefit from a range of options.



Bronchoscope inserted into target segment airway



InterVapor™ Catheter positioned into target segment airway



Occlusion balloon inflated and thermal vapour delivered



Thermal vapour delivery time based on IP3™: 3 to 10 seconds

New vapour ablation treatment

Dr Samuel Kemp is a consultant in respiratory medicine and an expert in lung disease. He regularly assesses patients and determines the most appropriate treatment – ranging from minimally invasive surgery, to devices such as endobronchial valves or coils which reduce lung volume. The result is that the healthier parts of the lung can work more efficiently, which gives patients relief from their breathlessness.

The newest treatment available is Bronchoscopic Thermal Vapor Ablation (BTVA), the first personalised treatment for emphysema that allows targeted treatment of a patient's most diseased emphysema segments whilst sparing healthier segments from being unnecessarily reduced.

“Guidelines show that anyone who has severe emphysema, who is significantly breathless after pulmonary rehabilitation, and whose lung function tests show their lungs are hyperinflated, should automatically be considered for lung volume reduction treatments,” Dr Kemp explains.

“Steam is well-suited to people who don't want surgery and who are not suitable for valves. It may be particularly appropriate for people who have disease that is very patchy. For some people, their disease is terrible in one area, but they have relatively well-preserved lung in nearby areas. The advantage of steam is that we can be much more selective about which areas of the lung we treat.”



Dr Samuel Kemp
Consultant respiratory physician

Dr Kemp specialises in treating a broad range of respiratory conditions including lung cancer, COPD, emphysema, lung nodules, pleural disease, and general respiratory medicine.

AT A GLANCE

PROCEDURE

Lung volume reduction:

Endobronchial valves, lung volume reduction coils, lung volume reduction surgery, and bronchoscopic thermal vapor ablation.

CARRIED OUT BY

Dr Samuel Kemp
Professor Pallav Shah
Mr Simon Jordan

WHAT PROBLEM DOES IT SOLVE

Improves lung function in patients with severe emphysema, leading to relief from symptoms of breathlessness and an improvement in their quality of life.

HOW DOES IT WORK

All four lung volume reduction treatments reduce the hyperinflation of the lungs.

- Lung volume reduction surgery reduces the volume and tissue of the most diseased lobes by surgically removing tissue.
- Bronchoscopic thermal vapor ablation reduces the volume and tissue of the most diseased segments of lobes by creating heat induced tissue insult and remodelling.
- Implanting endobronchial valves into the airways reduces the volume of a diseased lobe by blocking air from entering the lobe.
- Implanting coils into the majority of airways reduces the volume of the lung by compressing lung volume.

How it works

The procedure is quick, with the patient under general anaesthesia. Dr Kemp guides the catheter through the airways to the diseased segment and a precise, patient-specific dose of steam vapor is delivered.

An empirically derived algorithmic system works out how much thermal energy is needed, based on the lung weight, which is determined by a CT scan. The system also uses the scan of the patient’s anatomy to decide the best parts of the lung to treat.

“Steam vapor is very directable,” Dr Kemp says. “It’s much more targeted and is suitable for those where treating a whole lobe of the lung is not appropriate. With vapor, you can do a bit at a time.”

This painless vapor dose is delivered in 3 to 10 seconds, ablating the targeted portion of diseased tissue causing a natural, gradual reduction occurring over several weeks, which minimises the risk of potentially life-threatening pneumothorax.

“There’s a more gradual loss of volume, which makes it safer from a lung collapse perspective, and patients are in hospital for less time after the procedure.”

Post treatment

After the procedure, patients stay at the hospital for 24 hours for observation and monitoring.

“Valves, surgery and coils have quick effects. BTVA is a gradual lung tissue remodelling process. It’s likely to take six weeks for the full changes to take effect. It’s a quicker procedure – but a slower and potentially more controlled response,” Dr Kemp explains.

Research has shown that the treatment maintains lung improvement over time. The reduction of diseased overinflated lung segments allows healthier segments to uncrowd and the diaphragm to unflatten. This means the patient can breathe more easily and have a better quality of life.



The advantage of steam is that we can be much more selective about which areas of the lung we treat.

Dr Samuel Kemp



To find out more, or to refer a patient, please contact the customer services team on +44 (0)20 3131 0535 or email privatepatients@rbht.nhs.uk

Female leaders in cardiac and respiratory care

RB&HH Specialist Care has a wide range of specialists and support staff who are diligent, professional and understanding. These include a range of talented female consultants who are leaders in cardiac and respiratory care.

Cardiology



Dr Abtehale Al-Hussaini
Consultant general and interventional cardiologist
Royal Brompton Hospital

Dr Al-Hussaini specialises in interventional cardiology, such as coronary angiography, percutaneous coronary

intervention with or without stenting, and fractional flow reserve (FFR/IFR). She has expertise in cardiac imaging (including CT and CMR), intra coronary imaging and vascular imaging. Dr Al-Hussaini has vast clinical and research expertise in women with cardiac and vascular disease, focused on spontaneous coronary artery dissection (SCAD), fibromuscular dysplasia, and aortopathy. She is one of the only UK experts within this field, leading the UK SCAD registry.

“I see many young women with cardiac and vascular disease – some may be pregnant or have just delivered a baby. They have had life-changing events which may be easier to discuss with me, as a female doctor who can understand their concerns and challenges.”



Dr Aigul Baltabaeva
Consultant cardiologist
Harefield Hospital,
77 Wimpole Street

Dr Baltabaeva specialises in acute and chronic cardiac remodelling, valvular heart disease, hypertension, coronary artery disease and heart failure. She provides frontline clinical care for cardiology inpatients and outpatients, as well as high-end imaging such as cardiac magnetic resonance imaging, transoesophageal echocardiogram (TOE), stress echocardiography and transcranial doppler. She works closely with cardiac surgeons, identifying patients who may require surgery and managing their treatment before and afterwards.



Dr Rebecca Lane
Consultant cardiologist
Harefield Hospital

Dr Lane specialises in device implantation incorporating all types of pacemakers, defibrillators and cardiac resynchronisation therapy or biventricular pacing. She is the primary implanter of several new leadless

pacing technologies. Dr Lane is the clinical lead for heart failure, pacing and device services at Harefield Hospital. She has also developed and run the rapid access heart failure clinic, working closely with a team of specialist heart failure nurses.



Dr Wei Li
Consultant cardiologist
Royal Brompton Hospital

Dr Li is a well established and trained clinician who specialises in adult congenital heart disease and echocardiography, as well as pulmonary arterial hypertension, heart disease and pregnancy. She has research

interests in the physiology of complex congenital heart disease, right ventricular function in different disease conditions, pulmonary arterial hypertension associated with congenital heart disease, and the haemodynamic effect of pregnancy on cardiac function. She is the clinical lead for echocardiography in adult congenital heart disease and pulmonary hypertension at Royal Brompton Hospital.



Ms Rashmi Yadav
Consultant cardiac surgeon
Royal Brompton Hospital

Ms Yadav specialises in complex mitral valve surgery which includes both open heart and minimally invasive beating heart mitral valve repairs and replacements. She is currently undertaking a super-specialised fellowship in transcatheter mitral and tricuspid

interventions through a Zurich University Scholarship grant, the first of its kind in the world. Along with the complex mitral team at Royal Brompton Hospital, Ms Yadav is at the forefront of this rapidly developing field. Ms Yadav also specializes in complex multiple arterial and high risk coronary artery bypass graft (CABG) surgery.

Cardiology



Dr Shelley Rahman Haley Consultant cardiologist

Harefield Hospital, 77 Wimpole Street

Dr Rahman Haley specialises in adult heart valve disease, particularly complex mitral and aortic valve disease, mechanical circulatory support and cardio-oncology. She works closely with the surgical and transplant teams at Harefield Hospital to assess patients who may require surgery and monitor their progress afterwards. She also sees patients who are undergoing chemotherapy or other treatment that may affect the heart. As a female consultant, Dr Rahman Haley also has a particular interest in women's heart health.



"We know that historically women have been under-served when it comes to heart health. It is good for patients to have the option of seeing a female consultant, if that is their preference."



Dr Sabine Ernst Consultant cardiologist, Reader in cardiology

Royal Brompton Hospital

Dr Ernst specialises in treating complex arrhythmias, atrial fibrillation and ventricular arrhythmia in both paediatric and adult patients. She is one of the pioneers of remote magnetic navigation and has established this technique from its initiation to it becoming a routine clinical procedure using state-of-the-art equipment, including advanced 3D mapping techniques. The technique of remote magnetic navigation can particularly benefit patients with congenital heart disease, complex anatomy and arrhythmias. Dr Ernst's recent research focuses on the effect of neuromodulation on cardiac arrhythmia (especially in atrial fibrillation). In addition, she strives to perform her invasive procedures with as little radiation exposure as possible. She is the principle investigator of the ZERO-AF trial which aims to perform completely fluoroscopy-free ablations.

Respiratory medicine



Ms Emma Beddow Consultant thoracic surgeon

Harefield Hospital,
77 Wimpole Street

Ms Beddow specialises in surgery for lung cancer, major airway surgery and stenting, mediastinal tumours, metastasectomy (surgical removal of cancerous growths that have spread from cancer originating in another organ in the body), benign and malignant pleural disease and pectus surgery.

She also has experience in bronchoplastic resections including distal airway reconstruction, extended resections for lung cancer, tracheal surgery, endobronchial cryotherapy, chest wall tumours, video-assisted thoracoscopic surgery (VATS) and surgery for severe emphysema.



"In my first year as a qualified doctor, I did six months in cardiothoracic surgery and was mesmerised. I realised how hard it would be though – there were very few female cardiothoracic surgeons."



Miss Sofina Begum Consultant thoracic surgeon

Royal Brompton Hospital

Miss Begum specialises in adult and paediatric thoracic surgery such as surgery for primary lung cancer including lobectomy and segmentectomy performed via a uniportal video-assisted thoracoscopic surgery (VATS) approach. She also performs surgery on primary and metastatic chest sarcoma, surgery for advanced emphysema, surgery for pneumothoraces and pleural effusions. In addition, she has expertise in airway stenting and surgery involving the mediastinum.



Dr Alanna Hare Consultant in respiratory and sleep medicine

Royal Brompton Hospital, Wimpole Street

Dr Hare specialises in sleep disorders including insomnia, sleep apnoea, restless legs syndrome, periodic limb movement disorder and parasomnias. She also runs clinics in sleep disorders, respiratory failure and domiciliary ventilation and can offer patients many treatments to improve their symptoms. These treatments include cognitive behavioural therapy for insomnia (CBTi), continuous positive airway pressure (CPAP) for sleep apnoea and non-invasive ventilation (NIV) for respiratory failure.

Paediatrics



Dr Julene Carvalho
Consultant fetal cardiologist
Royal Brompton Hospital

Dr Carvalho specialises in imaging the fetal heart and counselling families at risk of or affected with fetal congenital heart disease (CHD). She pioneered the use of transabdominal fetal echocardiography in the first trimester of pregnancy and is known for her expertise in early scans.

Alongside obstetricians and obstetric ultrasonographers, she works to improve recognition of congenital heart disease before birth, get better results and more accurate diagnosis.



Dr Nitha Naqvi
Consultant paediatric cardiologist
Royal Brompton Hospital

Dr Naqvi specialises in caring for babies and children with all types of heart conditions. She is director of the paediatric cardiac network at Royal Brompton Hospital and is the leader of the paediatric aortopathy service. She has a special interest in congenital echocardiography, speckle tracking, fitness to fly in children with congenital heart disease and 22q11.2 deletion syndrome, also known as DiGeorge syndrome. She has been awarded the European Cardiovascular Imaging Accreditation.

“Paediatrics was the perfect specialty for me, as I love being with children. I chose cardiology because the heart is the most fascinating organ in the body. There are many times when it can actually be an advantage to be a female paediatric cardiologist. Teenage girls, in particular, often prefer to see a woman, especially to perform echocardiograms.”



Dr Samatha Sonnappa
Consultant in paediatric respiratory medicine
Royal Brompton Hospital

Dr Sonnappa specialises in the assessment and treatment of patients with respiratory problems under 16 years of age. She has expertise in diagnosing and treating children with asthma, wheeze, chronic cough, congenital lung abnormalities and chest infections. She has a special interest in children and athletes with exercise-induced breathing problems. She offers the continuous laryngoscopy during exercise (CLE) test to children and young people, which helps her to diagnose exercise-induced laryngeal obstruction (EILO), a condition which can cause breathlessness during exercise.



Dr Jan Till
Consultant paediatric electrophysiologist
Royal Brompton Hospital

Dr Till specialises in childhood arrhythmia, channelopathies, inherited cardiac disease (ICD), cardiomyopathies and catecholaminergic polymorphic ventricular tachycardia. She also runs a clinical service for families with channelopathies and she started an ICD programme meaning all family members can be seen under one roof, as all aspects of ICD are covered.



Dr Beverly Tsai-Goodman
Consultant paediatric and fetal cardiologist
Royal Brompton Hospital,
77 Wimpole Street

Dr Tsai-Goodman specialises in heart conditions of unborn babies, newborn babies and children. This includes diagnosing congenital heart disease (CHD), improving early recognition of CHD, detecting abnormalities in fetal hearts as early as 15–16 weeks gestation, and managing CHD in patients before they are born and up to young adulthood. She has developed a non-invasive tool to monitor cardiac output in newborns. Her research interest lies in using MRI in assessing the fetal circulation.

Dietetics



Dr Isabel Skypala
Consultant dietician,
clinical lead for food allergy
Royal Brompton Hospital

Dr Skypala specialises in the diagnosis and management of adult food allergy and intolerance, oral food challenges and dietary interventions. She set up a dedicated food allergy clinic in 2010, creating a ‘one-stop shop’ to diagnose food allergies in patients, especially where tests have been inconclusive. Her research into adult food allergy means she is an acknowledged international expert in plant food allergy diagnosis and management.

Learn more about our consultants by viewing their full profiles on our website: www.rbhh-specialistcare.co.uk/consultants

To refer a patient, please contact our customer services team on +44 (0)20 3131 0535 or email privatepatients@rbht.nhs.uk

ARRHYTHMIA TREATMENT WITH ZERO RADIATION

Catheter ablation for atrial fibrillation is a well-known corrective procedure. Thanks to new innovative three-dimensional (3D) mapping systems, more cardiac arrhythmia patients can now benefit from zero radiation exposure during transcatheter procedures.

Pioneered by Dr Sabine Ernst, consultant cardiologist and reader in cardiology at Royal Brompton & Harefield Hospitals Specialist Care, the unique 3D mapping technique removes the need for radiation.

The non-fluoroscopic catheter ablation for atrial fibrillation technique is an innovative treatment only available at the Royal Brompton Hospital. Dr Ernst is, so far, the only practitioner using this approach which entirely avoids using x-rays during the invasive procedure.

Arrhythmias, or abnormal heart rhythms, are widely experienced by people across the world. Atrial fibrillation is the most common form of arrhythmia and is a major cause of strokes. During Arab Health 2019, the biggest medical conference in the Middle East, Dr Ernst will showcase this unique approach during a simulated surgical presentation.

A US study featured in The Lancet¹ revealed the prevalence of atrial fibrillation in the Middle East triples with each decade of life compared to other developed countries, where it doubles with each decade of life. Additionally, twice as many women are affected by mitral stenosis than

men in the Middle East, which leads them to develop atrial fibrillation more often. These trends may be attributed to increases in sedentary lifestyles, ageing, obesity, diabetes, and hypertension. This suggests atrial fibrillation and stroke will become increasingly important health issues in the Middle East.

Atrial fibrillation causes the heart to beat irregularly and faster than normal and, if medication hasn't worked, the usual procedure for rectification is catheter ablation. This involves correcting abnormal electrical impulses in the heart, using x-rays in combination with 3D mapping to navigate the catheter.

The downside of the conventional ablation procedure is the exposure to radiation through x-rays, as they are linked to an increased risk of developing cancer in the future. This is particularly relevant when a patient is young, female and of child-bearing age or requires many x-ray guided procedures.

1. JAMA. 2001 May 9;285(18):2370-5. The Lancet. May 2012; vol 379; study of atrial fibrillation in the USA



Dr Sabine Ernst
Consultant cardiologist, Reader in cardiology at Imperial College London

Dr Ernst is an expert in catheter ablation of complex arrhythmias, atrial fibrillation, ventricular tachycardia, ablation with low fluoroscopy and remote magnetic navigation.

AT A GLANCE

PROCEDURE

Zero radiation catheter ablation using structured 3D mapping

CARRIED OUT BY

Dr Sabine Ernst, Consultant cardiologist, Reader in cardiology at Imperial College London

WHAT PROBLEM DOES IT SOLVE

It allows many arrhythmias to be treated with zero radiation exposure from x-rays. In most cases, a structured 3D mapping approach doesn't use radiation, so it doesn't increase a patient's cumulative lifetime exposure to x-rays (which can increase the risk of developing cancer later in life).

HOW DOES IT WORK

3D mapping helps to find the exact place in a patient's heart responsible for a faulty electrical pathway. During the ablation procedure, this site can be treated to stop the arrhythmia.



It's cumulative – every time a patient has a scan they up their risk. Anything to reduce this exposure is good for them.

Dr Sabine Ernst



A different roadmap

Dr Ernst explains: “If the patient’s heart is otherwise healthy, catheter ablation of atrial fibrillation works with the majority of cases with one treatment. But if a patient has heart disease or the atrial fibrillation is already persistent, then the procedure is less likely to work the first time and a patient may need multiple ablations. This automatically increases their radiation exposure.”

To reduce patients’ exposure to radiation, Dr Ernst has developed a new structured approach to catheter ablation of atrial fibrillation. This replaces x-ray navigation with an electro-anatomical mapping system that creates 3D images showing the catheters within the heart during the procedure. It also displays the transseptal needle used to enter the left side of the patient’s heart.

In addition, Dr Ernst uses 3D roadmaps from either cardiac magnetic resonance imaging (CMR) or computed tomography (CT) scans. These 3D roadmaps show the detailed anatomy of the patient’s heart and help to locate the catheters during the procedure. The mapping system uses a special catheter equipped with a sensor to allow exact localisation.

Zero or minimal radiation

With 3D mapping, the total radiation time from x-rays can be substantially reduced or completely eliminated. For a growing number of patients who need to undergo an ablation, the exposure to x-ray radiation can be zero, or reduced to just a few seconds.

With this approach, the patient’s lifetime ‘radiation bill’ is not added to with potential harmful radiation, therefore the cancer risk is not increased by the procedure or procedures.

Some patients, however, do need to undergo x-rays for their treatment, for example those with implanted devices such as pacemakers, defibrillators (ICDs) and biventricular devices. Depending on the position of an artificial heart valve, patients with a metallic heart valve may also require navigation using x-rays.

Since 2013, Dr Ernst has carried out over 60 catheter ablations without using any radiation at all.





Dr Sabine Ernst reviewing a case with colleagues

How catheter ablation with 3D mapping works

Dr Ernst starts by looking at a 3D image of the patient's heart, gained through CMR imaging. This removes the need for radiation, unless a patient has a contraindication with CMR and requires a CT instead.

To begin the procedure, a small puncture in the groin is made with a special needle which advances the catheter towards the heart, guided by images provided by the 3D mapping system.

Dr Ernst explains: "In the left atrium, I treat the entry points, the so-called pulmonary veins, and this reverts the heart to its normal rhythm. Typically, I also perform an ablation in the right atrium for the best outcome."

The procedure has equal success rates whether using x-ray or 3D mapping systems for navigation, and the approach doesn't increase a patient's cumulative lifetime exposure to x-rays.

In both cases, Dr Ernst says the whole procedure takes between an hour and a half and two hours. After the patient comes out from under the general anaesthetic, they need six hours' bed rest and a stay overnight on the ward. The next day, the team conducts safety checks, including an echocardiogram, and the patient is free to go home. Patients can return to normal physical activity after 10 days.

Benefits for patients

The main advantage for patients is a reduction in their x-ray exposure. Dr Ernst says: "It's cumulative – every time a patient has a scan they up their risk. Anything to reduce this exposure is good for them."

This benefit is particularly important for young women and all female patients of childbearing age. In addition, catheter ablation using zero or minimal radiation is a minimally invasive process which is an attractive option to females.

Dr Ernst has a strong appeal to women who prefer a female consultant in the event they need treatment for a cardiac arrhythmia such as atrial fibrillation. Dr Ernst can also arrange for an all-female team – comprising an anaesthetist, two nurses and two technicians – to work alongside her on the catheter ablation.

Links with the Middle East

Royal Brompton & Harefield Hospitals Specialist Care has a strong and long-established relationship with the Gulf region. The organisation works closely with health authorities including the Dubai Health Authority, Dubai Ministry of Health and Prevention, and Hamad Medical Corporation, Qatar.

Known across the world over for its expertise, standard of care and research success in lung and heart disease, Royal Brompton & Harefield Hospitals Specialist Care operates a visiting doctor programme with key hospitals across the Middle East region. The programme helps to provide better clinical outcomes and strengthen relationships with the region's healthcare providers.

Dr Ernst says: "The programmes and collaborations in place between Royal Brompton & Harefield Hospitals Specialist Care and hospitals in the Middle East region are there to ensure patients receive the best care while visiting the UK for treatment. Crucially, we also look to ensure that continuation of care is transferred back to the country. By sharing our knowledge, patients receive excellent care wherever they – this makes a real difference."

Dr Ernst also plans to cascade specific knowledge of her 3D mapping approach to catheter ablation across London and Europe in 2019. In the future, she is hopeful that this innovative and beneficial approach will be available globally.

To refer an arrhythmia patient or find out more, please contact the customer services team on +44 (0)20 3131 0535 or email privatepatients@rbht.nhs.uk

Visiting doctor programme

Royal Brompton and Harefield hospitals' clinicians regularly travel to share their knowledge with hospitals and healthcare organisations around the world. Our commitment to working with international teams has led us to develop a close relationship with the Sabah Al-Ahmad Cardiac Centre in Kuwait.

Royal Brompton and Harefield hospitals have always considered that sharing knowledge is one of the seven key values that shapes the Trust. That belief has led to partnerships with healthcare organisations both within the United Kingdom and across the globe. Our consultants and staff share their specialist knowledge through teaching, so that patients everywhere can benefit.

We have had developed a close relationship with the State of Kuwait over many years, treating over 1,000 Kuwaiti patients in our London hospitals over the last three years alone. In addition to treating patients, we have been working with the government of Kuwait to collaborate and learn from each other through a number of programmes including clinical fellowship and observership programmes, sharing best practice collaborations and our visiting doctor programme.

Partnership with Kuwait

Our consultants have been visiting hospitals in Kuwait for several years – to offer advice, training and take part in patient clinics. In addition, members of the senior management team from Royal Brompton & Harefield Hospitals Specialist Care regularly travel to Kuwait and have built strong relationships with these local hospitals, including the Sabah Al-Ahmad Cardiac Centre (SACC).

As a leading tertiary cardiac centre in Kuwait, SACC has collaborated on various projects with us since 2015. Our most recent collaboration is on a long term visiting doctor programme where some of our leading clinicians visit SACC in order to share their clinical knowledge and improve healthcare outcomes for Kuwaiti patients.

“

Dr Al-Hussaini's visit went very well. She did lots of cases in the cath labs, gave us a lecture and we hope she will make a future visit soon. All the visits so far have been very valuable for both our clinicians and patients and we will continue to grow our relationship with Royal Brompton and Harefield hospitals.

▲
Dr Ahmed Tharwat
Cardiologist, Sabah Al-Ahmad Cardiac Centre

“

We both have the same ambition – to provide patients worldwide with the best in cardiothoracic care. This partnership is allowing us to not only collaborate with a great hospital but to positively impact patient outcomes.

Ruku Bibi

Visiting specialists

Dr Robert Smith, consultant interventional cardiologist, Dr Abtehale Al-Hussaini, interventional consultant cardiologist and Dr Raad Mohiaddin, professor of cardiovascular imaging, took part in the programme in 2018.

“I spent time working with the Sabah Al-Ahmad Cardiac Centre team on challenging cases and sharing some of the new approaches that we use at Royal Brompton Hospital,” said Dr Raad Mohiaddin.

During their visits, our consultants immersed themselves into SACC practice and helped clinicians develop their practice as well as attend to patients and give thought-provoking lectures to large audiences.

The visits have been hailed a success with the consultants being asked to return for follow-up visits. Although there for just a week, the contributions made by our consultants have been effective and lasting.

A number of further visits are already planned for early 2019. This programme has further strengthened the relationship between SACC and RB&HH Specialist Care and we look forward to partnering with them on future projects.

Ruku Bibi, business development manager at Royal Brompton & Harefield Hospitals Specialist Care, who coordinates the programme, sees great future potential coming from this partnership.

“We both have the same ambition – to provide patients worldwide with the best in cardiothoracic care,” says Ruku. This partnership is allowing us to not only collaborate with a great hospital but to positively impact patient outcomes. We look forward to continuing this relationship.”

If you would like to discuss Royal Brompton & Harefield Hospitals Specialist Care’s visiting doctor programme or any other training or education programmes we offer please contact us on +44 (0)20 7351 8116, email privatepatients@rbht.nhs.uk or visit rbhh-specialistcare.co.uk/education



Dr Nadir El-Assousy and
Dr Abtehale Al-Hussaini

Social news feed

You can keep up to date with all our latest news by following our social media pages on Facebook, Twitter, Instagram and LinkedIn.

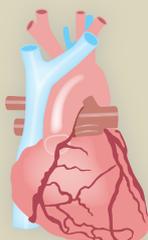


RB&HH Twitter

New approaches to coronary occlusion

Chronic total occlusion is when arteries have been blocked for 30 days or more; historically these have been difficult to clear. Newer interventional techniques have significantly improved the chances to open such blocked arteries, without the need for surgery.

Read more on [Twitter](#)



RB&HH Instagram

Another step forward

RB&HH Specialist Care visited Kuwait's Ministry of Health with consultant transplant surgeon, Professor Ulrich Stock, to continue to build strong relationships and explore future opportunities in Kuwait. [#transplantation](#) [#overseastreatment](#) [#internationalhealthcare](#) [#kuwait](#) [#middleeast](#)

Read more on [Instagram](#)



RB&HH Facebook

Breakthrough for thousands suffering from COPD

Professor Pallav Shah, consultant physician in respiratory medicine, said: "The new trial validates what several smaller studies have previously shown – that Zephyr® valves help patients become significantly less breathless and more active, improving the overall quality of their life."

Read more on [Facebook](#)



RB&HH LinkedIn

Increased heart attack risk in pregnant women

Dr Abethale Al-Hussaini, consultant cardiologist, aims to allow women with spontaneous coronary artery dissection (SCAD) to make an informed decision on whether to have a baby. SCAD can cause death, heart failure, cardiac arrest and require heart bypass surgery.

Read more on [LinkedIn](#)



RB&HH Twitter

Aortic valve replacement patients benefit from new valve

The Inspiris Resilia valve is estimated to last 30 years and removes the need for lifelong anticoagulants. It is intended to reduce the chance of patients requiring additional operations and allows them to regain or continue their active lifestyles.

Read more on [Twitter](#)



RB&HH Twitter

Fast and accurate diagnosis with the latest equipment

77 Wimpole Street offers cutting-edge PET-CT imaging, which can identify areas within the tissue which are affected by inflammatory and infectious processes. It is very valuable in the diagnosis, management and monitoring treatment response in [#CardiacSarcoidosis](#) patients.

Read more on [Twitter](#)



Sharing our specialist knowledge

Royal Brompton & Harefield Hospitals Specialist Care provides a wide range of education and training programmes designed to share our world-renowned cardiothoracic expertise – both in the UK and abroad.

Opportunities include clinical fellowships, observerships and visiting doctors programmes – each is designed to maximise training clinicians' learning outcomes and meet development needs.



▲
*Dr Sabine Ernst, consultant cardiologist, reader in cardiology,
with Dr Michael Rigby, consultant paediatric cardiologist*

Sharing best practice and collaboration

Our consultants have long-term relationships with international hospitals. They provide support and expert knowledge to help overseas hospitals achieve best practice and develop their own centres of excellence.

The latest thought leadership

We regularly host educational events and lectures, where our expert clinicians share their specialist knowledge about cardiothoracic medicine. You can head to our website to find video recordings of our educational talks and learn about new advances.

**Are you interested in
any of the programmes?**

To find out more about our educational opportunities or sign up to receive our news updates by email, visit www.rbhh-specialistcare.co.uk/education or email privatepatients@rbht.nhs.uk

