



ROYALFREE
world class care and expertise

Private Patients

Hepato-pancreato-biliary and liver transplant services



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Introduction

The Royal Free Hospital in London is one of the most prestigious medical institutions in the United Kingdom and is a leading centre for the diagnosis and treatment of all conditions affecting the liver, pancreas and biliary tree.

Dame Professor Sheila Sherlock, the 'mother of hepatology', founded the liver unit in the early '50s and was one of the greatest contributors to the development of this discipline. The liver centre is named after her. The Royal Free Hospital hosts one of the two Liver Transplant and Hepato-pancreato-biliary (HPB) Units in London and is a designated cancer centre for the treatment of tumours of the liver and pancreas. The Institute has the largest Neuroendocrine Tumour service in the United Kingdom, which is nationally funded, and as a result a large number of neuroendocrine pancreatic primary and liver secondaries are treated in our Institution.

The recent designation as an Academic Health Science Centre (UCL Partners), in partnership with University College Hospital, Great Ormond Street and other key hospitals provides a huge range of investigatory and therapeutic options. No other collaborative group in the United Kingdom can offer a similar service. The Gastroenterology and Hepatology Partnership clinical and academic services rank in the world top ten, with a superb international reputation for its research, service and education.

At the Royal Free Hospital a large number of specialists work in the HPB and Liver Transplant Unit. A multidisciplinary approach is crucial in the management of our patients and about 50 consultants cover different areas of expertise. Surgeons, hepatologists, gastroenterologists, radiologists, oncologists, radiotherapists, nuclear medicine physicians, histopathologists, virologists and microbiologists have regular scheduled meetings to discuss the best treatment plan. Extensively trained nursing staff, clinical nurse specialists, transplant co-ordinators, perfusionists, dieticians and physiotherapists all contribute to the multidisciplinary approach. Finally, we benefit from technical equipment and expertise which only a liver transplant centre can offer, including the outstanding skills of the anaesthetic and intensive care personnel. All of this ultimately translates into excellent clinical results and improved patient safety.

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Consultant team

Hepatologists



Professor Andrew Burroughs MBChB (Hons) FEBG FRCP

Professor of Hepatology and Consultant Physician

Professor Burroughs is the senior physician of the Liver Transplant Programme and the Acute Liver Failure Service. He has an international reputation as a clinical and academic hepatologist and has published widely in all areas of liver disease. He is a full-time clinician and is Professor of Hepatology at the University of London (UCL).



Professor G. M. Dusheiko MB BCh FCP (SA) FRCP FRCP (edin)

Professor of Medicine and Honorary Consultant

Professor Dusheiko is a hepatologist and lead clinician on the viral hepatitis service. With an international reputation, he has published widely in the field of viral hepatitis and antiviral therapies. Professor Dusheiko is an academic physician with a large clinical input.



Dr James O'Beirne MB Bs (Hons) MD MRCP EDICM

Consultant Hepatologist

Dr O'Beirne trained in liver transplantation, hepatology and intensive care at the Royal Free and Kings College Hospital, London. He shares the care of the liver transplant patients with three other consultants, in addition to providing a broad endoscopic service. He has a particular interest in intensive care.



Dr David Patch MBBS FRCP

Consultant Physician and Honorary Senior Lecturer

Dr Patch shares the liver transplant service at the Royal Free Hospital with his colleagues. He is involved with clinical trials and research in portal hypertension and is a leading expert in transjugular liver biopsies and TIPS procedures. He also maintains a broad endoscopic practice.

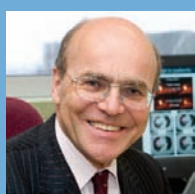


Dr Douglas Thorburn MBBS FRCP

Consultant Hepatologist and Clinical Director for Gastroenterology and Liver Services

Dr Thorburn was appointed as a consultant in the liver unit in Birmingham in 2003, before moving to the Royal Free in March 2008, where he is now the Clinical Director for Gastroenterology, Hepatology, HPB Surgery and Liver Transplantation. In addition to liver transplantation, his interests include ERCP and endoscopic ultrasound.

Oncologists



Professor Richard Begent MD FRCP FRCR FMedSci

Professor of Clinical Oncology and Head of the Department of Oncology

Professor Begent directs the Cancer Clinical Research Facility and is joint lead of the Experimental Cancer Medicine Centre. His clinical interests are in gastrointestinal oncology, including liver, colorectal, biliary and pancreatic tumours. He is the principal investigator and has pioneered antibody-targeted and tumour vascular disrupting therapies in clinical trials. His clinical research is supported by multiple international organisations.



Dr Christopher H Collis MD (Cantab) FRCP FRCR

Senior Consultant Oncologist and Honorary Senior Lecturer in Radiotherapy and Oncology

Dr Collis has been a member of the hepatobiliary team at the Royal Free and a member of the North East Thames network tumour board for many years. He has a special interest in the development of conformal radiotherapy for these cancers. Dr Collis has also pioneered the combination of chemotherapy with radiation 'chemoradiation' and co-authored several publications on this subject.



Dr Tim Meyer MD BSC FRCP PhD

Senior Lecturer in Medical Oncology

Dr Meyer is a medical oncologist with a special interest in hepatobiliary and neuroendocrine cancers. He has practised at the Royal Free Hospital since 2002 and leads an active clinical trial portfolio, as well as a research laboratory at UCL.

Surgeons



Professor Brian Davidson MD FRCS

Professor of Surgery

Professor Davidson is a consultant surgeon with 17 years' experience in complex HPB and liver transplant surgery, with published evidence of outstanding outcomes. He is Professor of Surgery at UCL and UK Editor for the Cochrane HPB group. Research themes are 1) reducing liver damage from surgery and transplantation and 2) novel methods for treating HPB cancers. He has published over 300 peer-reviewed papers on these topics.



Mr Giuseppe K Fusai MS FRCS

Consultant Surgeon and Honorary Senior Lecturer in Hepatobiliary, Pancreatic and Liver Transplant Surgery

Mr Fusai is a specialist in HPB and liver transplant surgery, including laparoscopic surgery. He has a specific clinical and academic interest in oncological surgery and in the treatment modalities to increase the resectability of patients with advanced pancreatic cancer, cholangiocarcinoma and liver metastases. He is also an expert in the treatment of benign HPB conditions, such as complex gallstone disease and pancreatitis.



Professor Massimo Malagó MD PhD

Professor of Surgery

Professor Malagó has a special interest in hepato-biliary-pancreatic, oncologic and transplantation surgery. He is both European and American trained and certified. He performed the first right living donor hepatectomy and the first successful adult living donor liver transplantation in Europe. His scientific interests are surgical techniques in split and live donor transplantation, Small for Size Syndrome in liver transplant, post-surgical liver failure and cholangiocarcinoma.



Mr Zak Rahman MD (Hons) FRCS

Consultant in Pancreaticobiliary, Obesity and Minimally Invasive Gastroenterology Surgery

Mr Rahman focuses on all aspects of pancreatic and biliary, in addition to complex laparoscopic and minimally invasive upper gastrointestinal disorders. He leads the development of laparoscopic pancreatic surgery and bariatric surgery. Mr Rahman was awarded a Hunterian Professorship by the Royal College of Surgeons of England, in 2007, and the Lord Smith medal, from the Pancreatic Society of Great Britain and Ireland, in 2005.



Mr Keith Rolles MA MS FRCS

Consultant Surgeon and Senior Clinician

Mr Rolles is a senior surgeon and founder of the liver transplant unit. The programme currently performs over 80 transplants annually. Mr Rolles has more than 25 years' experience as a consultant surgeon in liver transplantation, as well as complex hepatobiliary surgery and endocrine surgery.

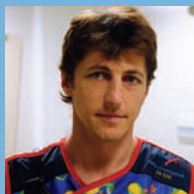


Mr Dinesh Sharma MBBS MS FRCS

Consultant Hepatobiliary, Pancreatic and Liver Transplant Surgeon

Mr Sharma is the clinical lead for liver transplant and HPB surgery. He is one of the core surgeons in the cancer network, performing liver, biliary and pancreatic surgery for benign and malignant diseases, as well as liver transplant surgery.

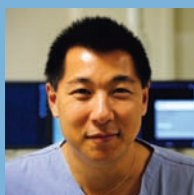
Radiologists



Dr Neil Davies MBBS FRCS FRCR

Consultant Radiologist

Dr Davies currently leads the Interventional Radiology Department. He is interested in all aspects of HPB-imaging particularly vascular and non-vascular intervention, including TIPS, transarterial liver embolisation, radiofrequency ablation and portal vein embolisation.



Dr Dominic Yu MBBS MRCPI FRCR

Consultant Hepatobiliary Radiologist

Dr Yu is a consultant radiologist specialising in hepatobiliary radiology, both diagnostic and interventional. He is particularly interested in liver transplant radiology, management of portal hypertension and radiological treatment of liver tumours.

Medical

Viral Hepatitis

Hepatitis C virus (HCV) is estimated to infect around 170 million people worldwide; although it is curable, underdiagnosis means that as few as one in 100 sufferers is receiving the appropriate treatment. Hepatitis B infects around 2 billion people – one in three people worldwide. Of these, many will develop chronic liver disease, resulting in an estimated 1 million deaths a year worldwide from cirrhosis and liver cancer.

There are new treatments for Hepatitis B and C. It is important to make an early diagnosis, as this correlates with a better prognosis. There is a specialised team of consultants who manage particularly complex cases, such as those with resistance to previous antiviral treatment and patients with multiviral co-infection. We have a dedicated laboratory on site to process samples for viral drug resistance – an essential component of care.

At the Royal Free, we can use a transjuglar liver biopsy; this is less painful for patients, enables better samples to be taken and involves a hospital stay of six hours or less. Where a liver biopsy is inappropriate, transient elastography (Fibroscan) can be performed.

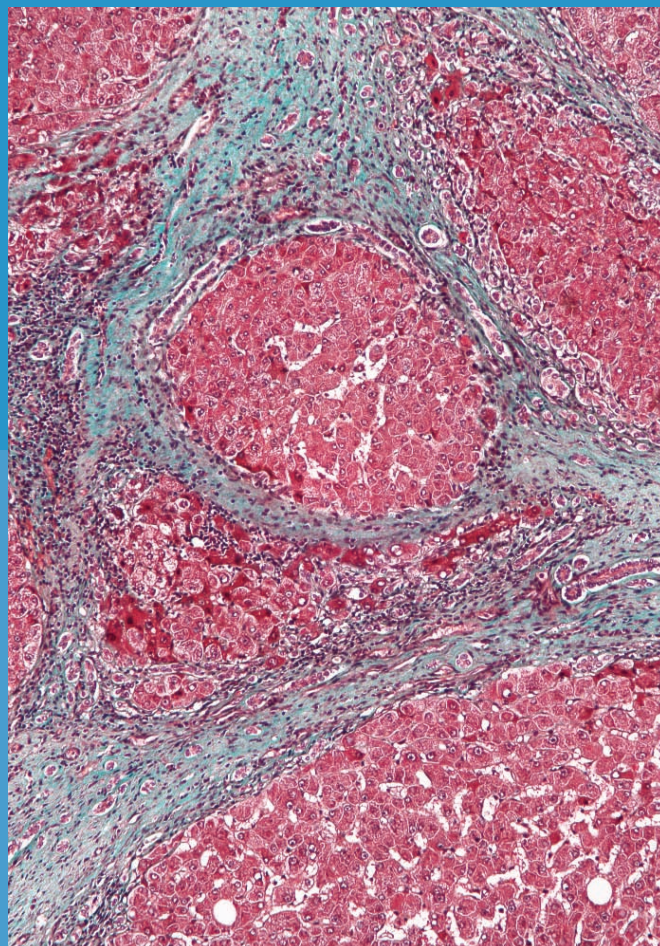
Our specialist nurses act as a link between the consultants and patients and are able to follow patients very closely day to day if necessary whilst they have therapy and in order to give support and advice.

Cirrhosis

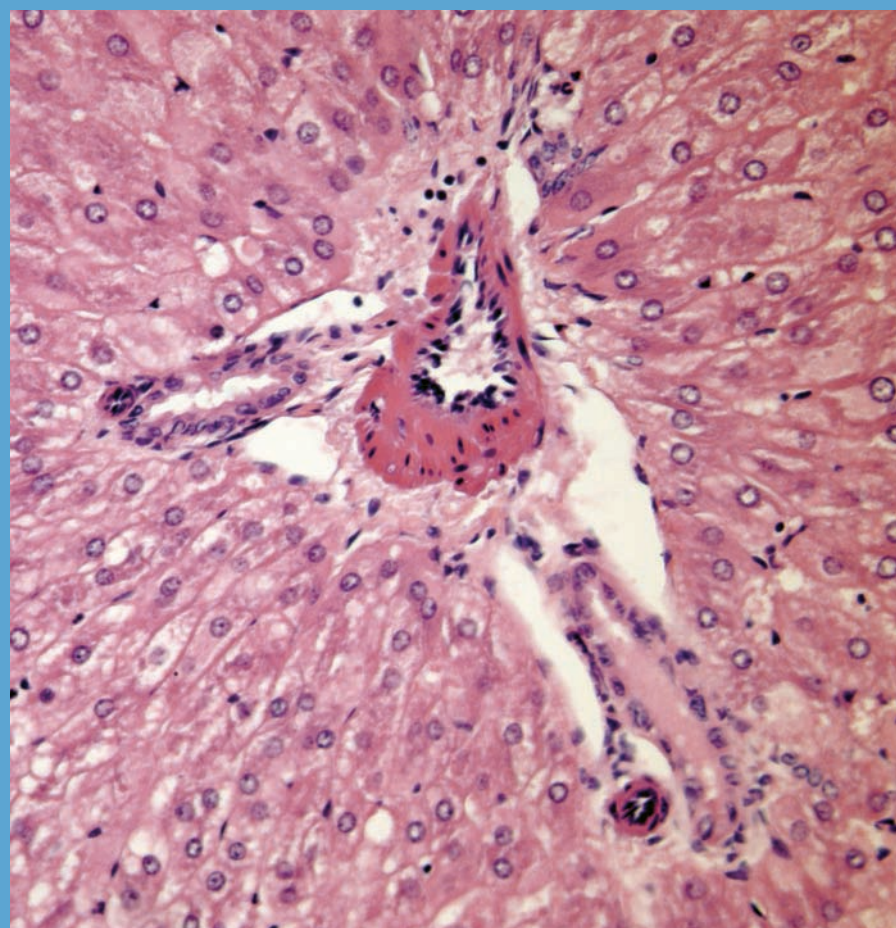
It is important to diagnose this condition, as it is a risk factor in developing cancer of the liver. Sometimes, complications of cirrhosis occur, indicating a deterioration of the condition: worsening jaundice, ascites, hepatic encephalopathy, infections and bleeding varices. All these complications need expert care and prompt intervention with 24 hour back-up and on-call facilities for hepatologists, radiologists and surgeons, as well as ITU facilities which are provided.

Endoscopic Therapy for Bleeding and Biliary Problems

We have a full range of endoscopic services, including a 24-hour emergency gastrointestinal bleeding service provided by the on-call consultant hepatology or gastroenterology team. The biliary diagnostic and therapeutic endoscopy service includes on-site Endoscopic Ultrasound Scan (EUS) and Endoscopic Retrograde Cholangiopancreatography (ERCP), using the most up-to-date equipment, as well as oesophageal stenting, for bleeding varices. Small bowel endoscopy is undertaken with 'Pill' endoscopy – a small digital camera inside a small capsule which is swallowed and sends images to a computer.



Cirrhotic nodule




Normal portal tract triad

Biopsies

Transjugular liver biopsy (TJ biopsy) is an alternative to standard percutaneous liver biopsy for the diagnosis and monitoring of liver disease. TJ biopsy is performed in the interventional radiology suite by radiology and hepatology consultants and is suitable for patients with abnormal clotting or ascites due to liver disease, which may increase the risks involved in standard liver biopsy. We pioneered the use of TJ biopsy in the management of liver disease and now perform more than 250 procedures a year.

The transjugular approach is very safe, as the biopsy is taken from within the liver itself, through the wall of the hepatic vein, under radiological control. As the patient does not have to hold his/her breath for the procedure, we can perform it under some sedation; this is helpful for those patients anxious about the procedure. Patients can be directly referred for transjugular liver biopsy to our hepatology consultants. We also perform endoscopic ultrasound biopsies of the pancreas and biliary system.

Surgical

A high-contrast, close-up photograph of two surgeons in an operating room. The surgeon on the right is in the foreground, wearing a blue surgical cap and a white face mask, looking down intently. The surgeon on the left is partially visible, wearing a green surgical cap. Both are wearing blue surgical gowns. The scene is dramatically lit, with strong highlights on the surgeons' faces and caps, and deep shadows elsewhere. A surgical instrument is visible in the lower right corner.

Every year approximately 300 major surgical operations are carried out including liver and pancreatic resections, complex biliary procedures and liver transplants. Patients are referred not just from London, but also from other regions and International countries. Some of these seek a second or a third opinion, having been deemed inoperable or untreatable elsewhere. A consultant surgeon is available 24 hours a day to accept referrals and manage emergency cases.

Liver Metastases

Various strategies have been designed to increase the resectability of advanced liver tumours, including downstaging chemotherapy, portal vein and transarterial embolisations, two-stage hepatectomy, local ablation techniques and, in highly selected cases, extracorporeal liver surgery. With this integrated and multidisciplinary approach, we have observed a substantial increase in the number of patients who can ultimately benefit from surgery. Liver metastases from colorectal cancer are commonly treated, but secondaries from other tumours are also considered for surgery, the commonest being neuroendocrine, breast and renal cancer.

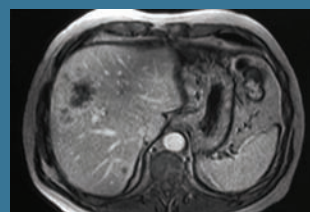
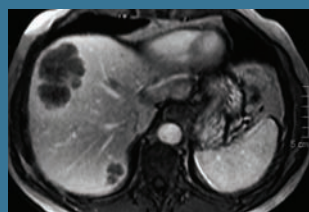
An increasingly larger proportion of liver resections is now performed laparoscopically, enhancing a prompt recovery, without affecting oncological radicality. With this minimally invasive technique, patients are usually discharged within a few days of the operation and return to a normal activity and lifestyle in two to three weeks. For this purpose, two state-of-the-art theatres have been recently built with advanced laparoscopic equipment.



Five ports are usually used for a laparoscopic liver resection. The specimen is extracted through a suvrapubic transverse incision.

Downstaging Chemotherapy

Approximately 15% of patients with initially inoperable liver metastases from bowel cancer are ultimately resected, after neo-adjuvant chemotherapy. The treatment includes Oxaliplatin or Irinotecan, in combination with 5-Fluorouracil. Monoclonal antibodies, such as anti-VEGF or anti-EGFR are available to private patients and have been associated with a better response rate than conventional regimens. Recruitment into clinical trials is also possible in collaboration with our oncologists.

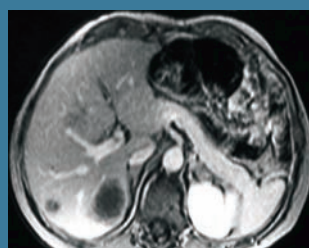


Liver metastases from colorectal cancer, successfully downstaged by neo-adjuvant chemotherapy.

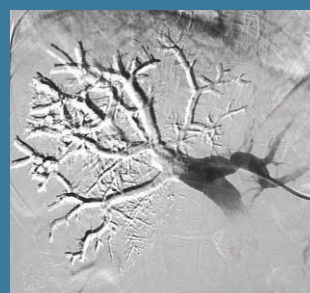
Portal Vein Embolisation

Portal vein embolisation (PVE) is performed in patients expected to undergo major liver resection, when the future liver remnant is inadequate. Volume reduction of the embolised liver induces compensatory hypertrophy in the contralateral lobe, thus preventing liver failure. Specific contrast-enhanced MRI studies are required prior to and after PVE, to measure liver volumes and assess the response, usually after a four-week interval.

Portal vein embolisation is carried out percutaneously under local anaesthesia by our consultant radiologists and normally requires a short hospital stay.



Portal vein embolisation has successfully induced hypertrophy of the left lateral lobe, in a patient with liver metastases, who was operated a few weeks later.



Angiography of the portal vein and final embolisation of the right portal vein branch.

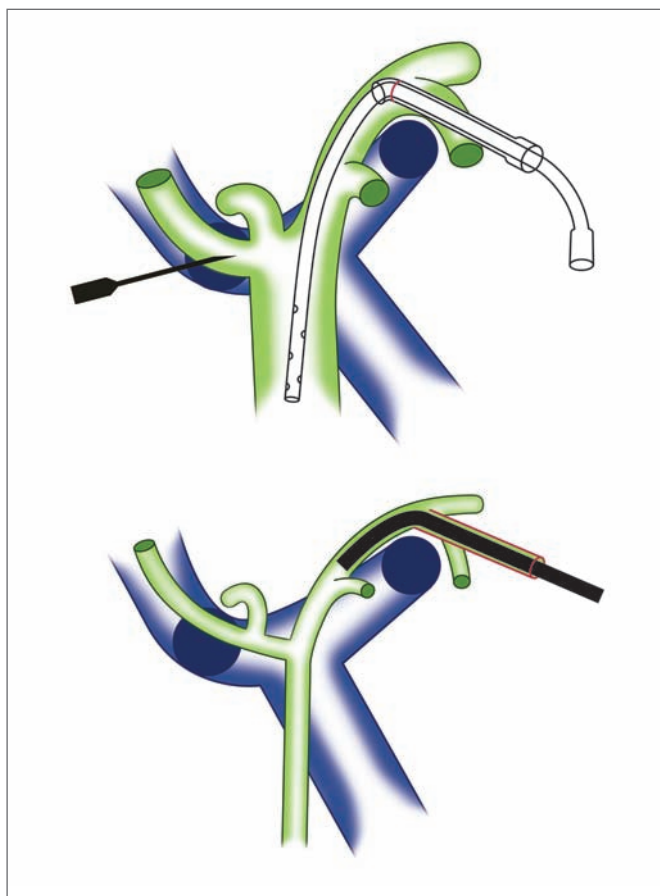
Hepatocellular Carcinoma

Hepatocellular carcinoma (HCC) arises commonly on a background of chronic liver disease and more rarely in a normal liver. It can be solitary or multifocal and is best managed in liver transplant centres which offer the whole range of treatment modalities and specialists.

Management of these patients is complex and requires the input of liver physicians, as decompensation after surgery or even after less invasive treatments, such as transarterial embolisation techniques, may occur.

Liver transplantation and surgical resection are the only potentially curative options, but we also have considerable experience with transarterial embolisation (also used as a bridge to liver transplant), ethanol injection, radiofrequency ablation (RFA) and selective intrahepatic radiotherapy (SIRT) for cases with inoperable disease. All these procedures are carried out by our consultant radiologists.

Chemotherapy with Sorafenib is also available to private patients, as it has been shown to improve survival in the context of controlled randomised trials.



Cholangiocarcinoma

The incidence of cholangiocarcinoma, cancer of the bile duct, has steadily increased over the years. Patients commonly present with jaundice as a result of biliary obstruction.

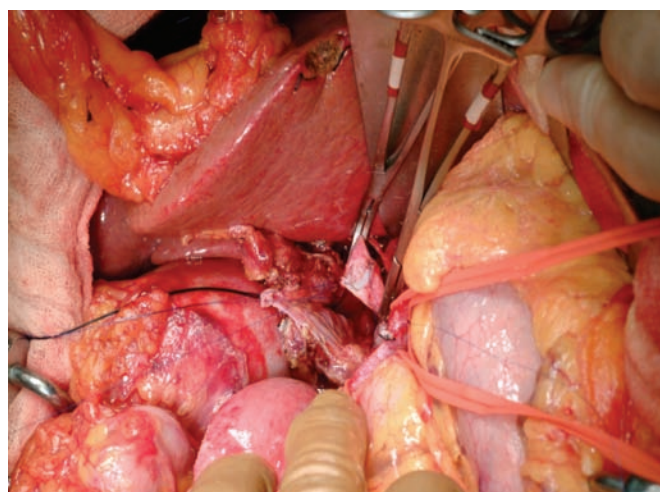
A close collaboration with our interventional radiologists is essential, as percutaneous biliary drainage is necessary to decompress the biliary tract, to prevent cholangitis and to facilitate liver regeneration after surgery. With this approach, biopsy and direct visualisation of the tumour with cholangioscopy is also feasible.

Cholangiocarcinoma and gall bladder cancer are traditionally poorly responsive to chemotherapy and extensive hepatic resections are frequently required to eradicate the disease. Vascular resection and reconstruction are also required in cases with locally advanced tumours.

In patients with inoperable disease, palliation is achieved by deploying mesh metal stents in the biliary tree by the interventional radiologists to ensure adequate bile flow and resolution of the jaundice. Chemotherapy, alone or in combination with photodynamic therapy (PDT), is available to palliate these patients. With PDT, a photosensitising drug is injected intravenously and is subsequently activated by laser light applied directly to the tumour with a small probe deployed endoscopically or percutaneously.

The left branch of the portal vein was involved by a hilar cholangiocarcinoma.

The portal vein has been resected en-bloc with the tumour and is being reconstructed.



Pancreatic Cancer

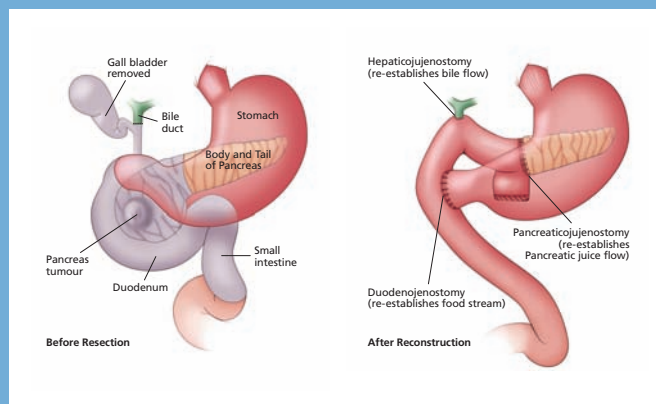
Pancreatic surgery for malignant and benign conditions is one of the areas of expertise at our Institution, which is a designated high-volume pancreatic cancer centre. Every year a large number of pancreatoduodenectomy and distal pancreatectomy operations are performed for lesions of the head and body/tail of the pancreas respectively.

Patients with pancreatic cancer often present late with locally advanced disease, mainly due to vascular involvement. We routinely perform vascular resection and reconstruction of the portal vein, sometimes with an interposition graft taken from the internal jugular vein.

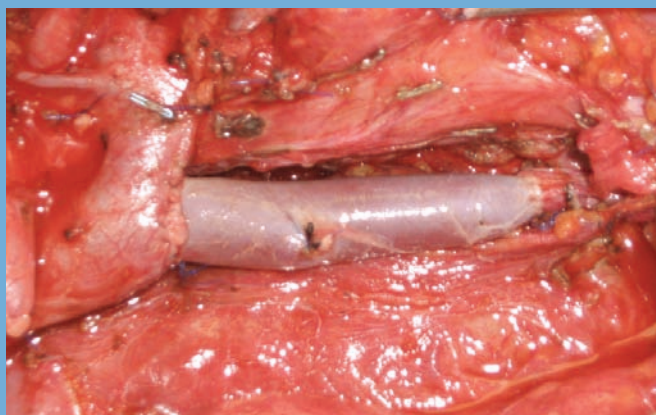
This aggressive approach has not translated into a greater morbidity; to date, we have not registered any perioperative death.

Chemotherapy, alone or in combination with radiotherapy, plays a crucial role in the management of these patients, either as a neo-adjuvant treatment to downstage inoperable tumours or delivered postoperatively to minimise the chance of recurrence (adjuvant chemotherapy).

In line with liver surgery, patients with benign cystic lesions and pancreatic neuroendocrine tumours are now operated laparoscopically. The Royal Free Hospital is also a referral centre for patients with acute and chronic pancreatitis, as well as simple or complex gallstone disease.



Pancreatoduodenectomy for pancreatic cancer.



The portal vein has been resected en-bloc with a pancreatic tumour and continuity of the venous system restored with a segment of internal jugular vein.



Liver Transplantation

The liver transplant programme began in 1988 and since then more than 1100 liver transplants have been performed. Progress in the transplant field has led to the development of a range of techniques, which are all available here at the Royal Free Hospital. Split grafts (two grafts from one liver), organs from non-heart beating donors and living-related liver transplantation are currently performed at our Institution.

Patients with hepatocellular carcinoma, advanced chronic liver disease and liver cirrhosis are admitted for an extensive but rapid assessment to establish their suitability for transplantation. Patients with acute liver failure are urgently transferred to our Intensive Care Unit, where joint care between intensivists, hepatologists and surgeons, is essential in the management of multiple organ failure and to select those cases which would benefit from liver transplantation.

Five transplant co-ordinators work in the transplant team. Part of their role is to provide patients and families with customised information and psychological support, throughout the transplant process. After the transplant, they give advice about the necessary medications and how the patient can return to a normal lifestyle.

Interventional Radiology

Imaging

The Royal Free's diagnostic and imaging facilities are some of the most sophisticated and up to date of their kind in the UK. The specialist HPB radiologists undertake complex interventional procedures, supported by our highly experienced senior radiographers and specialist nurses who are accustomed to dealing with patients with liver disease. From computerised tomography (CT and SPECT CT) and magnetic resonance imaging (MRI) to positron emission tomography (PET) and ultrasound scans, we are able to deliver outstanding images which speed up the time from diagnosis to treatment and help to identify the most appropriate treatments for patients and their condition.

TIPS

Transjugular intrahepatic shunt (TIPS) diverts blood flow from the portal to the systemic circulation, bypassing the liver. The procedure is performed radiologically: a mesh metal stent is deployed through the jugular vein, to connect the portal vein to the hepatic veins.

TIPS is useful in those patients with portal hypertension which is complicated by bleeding from gastrointestinal varices and or diuretic resistant ascites. It is also an excellent treatment for Budd-Chiari syndrome, caused by occlusion of the hepatic veins.

The Royal Free provides a 24-hour emergency TIPS service and has one of the best survival figures for gastrointestinal bleeding in the UK.

Adjuvant Therapies for Cancer

Chemotherapy

The Department of Oncology has expertise in all types of gastrointestinal cancer, with particular interests in primary and secondary liver and biliary cancers. This is backed by an extensive research programme of clinical trials and laboratory research to develop new treatments and better ways of imaging and monitoring these cancers. This is supported by the UCL Experimental Cancer Medicine Centre and major research grants from Cancer Research UK and the National Institute for Health Research, as well as by national and international research collaborations.

Radiotherapy

The Royal Free Radiotherapy Department hosts a multiprofessional team which encompasses the work of the clinicians, radiographers, radiotherapy review specialists, radiotherapy physicists and technologists. The department is a tertiary referral centre for the provision of specialist cancer services, providing radiotherapy services to a wide sector of London, as well as to private patients worldwide.

The department provides both palliative and radical cancer treatments. All treatments are CT planned and most radical treatments are undertaken with a 3D/conformal treatment plan.

The department uses a range of equipment to plan and deliver accurate and safe radiotherapy treatment to patients. This includes an AcQSim CT simulator and twinned dual-energy 6MV and 10MV Varian 2100CD linear accelerators installed just two years ago, with a 120-leaf integral multi leaf collimator, with a-Si KV portal imaging system, with gating facility, with cone beam, and with electron beam facility.



Research

Research and innovation underwrite excellence and are core activities of the liver centre at the Royal Free, which works in partnership with University College London, ranked fourth best university in the world.

Research at the Royal Free stretches from basic laboratory studies, looking to the future in the exploration of gene therapy, cell therapy, and bio-artificial livers and the development of fibrosis, to the assessment today in the clinical arena of the newest therapeutic drugs and endoscopic techniques.

Our consultants have contributed internationally at the highest level across the whole spectrum of liver disease.

HPB Cancer

Pathogenesis and markers in HPB cancers. Supported by an established Biobank with over 600 samples collected over 15 years. Research themes include HCC development and treatment, chemotherapy responses and trace elements in colorectal metastases, tumour metabolome in pancreatic cancer and apoptosis modulation in cholangiocarcinoma. Collaborative research is undertaken with UCL Oncology, other cancer groups and industry.

Complications of Cirrhosis

There are multiple projects on bleeding, infection, fluid retention, renal failure, hepatocellular cancer, coagulation in patients with cirrhosis as well as the monitoring and assessment of fibrosis.

Liver tissue engineering group (LTEG)

Major themes are organ preservation injury, cryopreservation, ischaemia-reperfusion injury and its modulation by pharmacological agents, direct and remote pre-conditioning. Extensive basic experimental work and first in man remote pre-conditioning trial in liver surgery. Bioengineering, nanotechnology and stem cell expertise focus on bio-artificial liver and technology developments in liver surgery techniques.



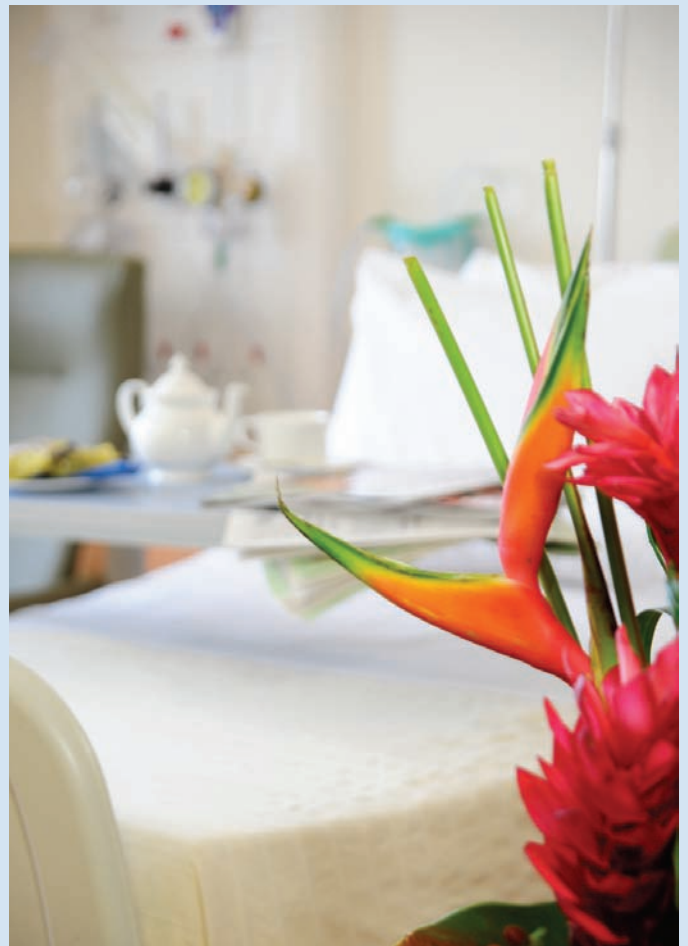


Facilities

The private practice is situated on the 12th floor of the building, with beautiful views over central London and the Heath, one of the largest parks in the capital. All rooms have an en-suite bathroom, telephone and an option to accommodate a relative.

The hospital has state-of-the-art Intensive Care Facilities supported by Consultant Intensivists. High-dependency unit facilities are also in place to monitor critical and postoperative patients. Our nursing staff are extensively trained to look after patients with complex medical and surgical conditions.

Many of our patients travel from abroad to receive treatment. We are aware of the difficulties which they might encounter, so a great effort is made to ensure that their clinical as well as psychological needs are satisfied. For this reason we have a 24-hour interpreting service to guarantee adequate communication between our staff, patients and their relatives. We also have a multi-faith chapel and provide updated information and entertainment through a multichannel cable television, as well as international newspapers and magazines. Our catering service offers the option to select different types of freshly cooked meals, according to individual preference and faith.



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