



Liver and Pancreatic R&D

CANCER CHARITY

Results through research

## A word from our patron and chairman

"It is over one year since LAP R&D asked me to be the Patron and Chairman for the charity. In that period, I have had the opportunity to meet a number of the patients and the researchers working on the projects we are funding. I am delighted with the progress made on our research projects.

Liver and Pancreatic Cancer affects more than 15,000 patients in the UK every year. There is still a scarcity of funds dedicated to research to improve early detection and survival rates, which have not improved in the last 40 years. That is why LAP R&D is important to me, as it is trying to make a real difference.

We are approaching World Pancreatic Cancer Day on Thursday 16th November 2017. I hope we can get a few landmarks lit purple, the colour associated with Pancreatic Cancer, and to get people talking."

*Kelvin Davis, Chairman and Patron, LAPR&D*

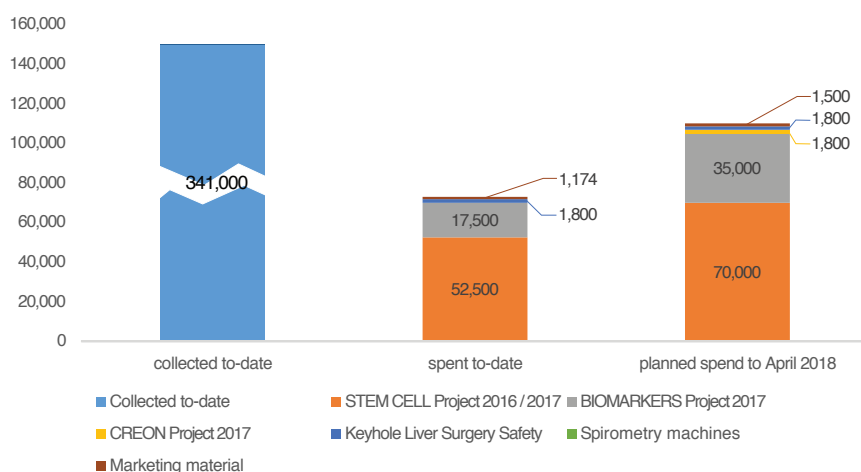


Don't forget to like our Facebook page!  
[www.lapcancercharity.com](http://www.lapcancercharity.com)

## Where does the money raised go?

Typical costs

- £40,000 funds a research post for 12 months
- £5,000 funds consumables for a student researcher for 12 months
- £1,000 funds the charities PR material for 12 months
- £154.85 funds a researcher for a day
- £1,800 funds a PHD student for 12 months



Southampton Hospital Charity

Charity registration number: 1051543

## Take up the challenge

Our supporters have done some amazing things over the past year to pass through the £340,000 mark to support the work of the charity including:

- An Evening of Song with the Eastleigh Fusion Choir on 5th July raised a fantastic £1,860
- Friends Jane Watson and Julie Sargent completed the Bournemouth Half Marathon on 8th October raising over £1,000

If you have any ideas for a fundraising event please contact us via our contact details below.



Web site: [www.lapcancercharity.com](http://www.lapcancercharity.com)

Email: [info@lapcancercharity.com](mailto:info@lapcancercharity.com)

Facebook:

<https://www.facebook.com/LAPRANDD>

Twitter: @LAPRANDD

Tel: 07773 338629



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## The Autumn 2017 Newsletter of the Liver and Pancreatic Research & Development Charity

*Welcome to our autumn newsletter. It has been six months since we last shared some updates with you and, with your help, a lot has happened since. We are really proud with some of the progress and developments in our research programme.*



We thank you for your support and hope you enjoy this issue. Please tell us if there are topics you would like covered in future issues.

Mo Abu Hilal, Founding Member of LAPR&D, Liver and Pancreatic surgeon at Southampton University Hospital.

## Improving the safety of laparoscopic surgery (keyhole)

The LAPR&D Cancer Charity is proud to continue to support the leading role of Southampton University Hospital in the expansion of the use of laparoscopic (keyhole) surgical techniques.

### Keyhole surgery for the pancreas

Since 2007, all surgery for lesions in the pancreas were treated laparoscopically at Southampton. Four months ago, Professor Hilal successfully pushed boundaries further by performing the first Whipples procedure via keyhole surgery. The patient was discharged home on the 4th post operative day. The Whipples procedure is complex and takes 6-8 hours of surgery and traditionally has been performed through a 20-30cm incision. Performing this procedure laparoscopically is a huge step towards improving patients experience and outcomes. It is associated with reduced pain, earlier recovery and faster return to normal life.

### Liver Keyhole Surgery Guidelines

Experts have agreed that keyhole liver surgery offers a number advantages to patients when compared with those undergoing traditional open surgery including reduced pain, less blood loss, quicker recovery and earlier discharge. However, there are no recognised guidelines for its use. The guidelines cover 4 areas: Indication;



The Guidelines Committee and Working Group

### STOP PRESS!!

Limited tickets still available for our Annual Ball on Saturday 11th November at Southampton FC. Phone Florence Gimonet on 07722113290

15,000 patients affected by Pancreatic Cancer in the UK every year

Only 4% of patients survive Pancreatic Cancer beyond 5 years

Pancreatic Cancer is the 5th biggest cancer killer worldwide

It receives just 1% of overall Cancer research funding in the UK

5,100 patients affected by Liver Cancer in the UK each year

Survival rate very dependant on age

Liver Cancer is the 11th biggest cancer killer

Patients and Complex Disease; Procedures; Technique and Implementation.

They have now been validated by a Committee, chaired by Dr. Horacio J. Asbun, Professor of Surgery at the Mayo Clinic in Florida, USA. Patient interests on the working group were represented by one of our own LAPR&D charity members.

The Southampton Guidelines will be soon published and will be adopted worldwide.



## Improving the safety of Liver laparoscopic (keyhole) surgery

Part funded by LAPR&D and under the supervision of Professor Abu Hilal, Mark Halls has analysed the success rate of keyhole liver surgery. Their conclusions have been published in The Annals of Surgery and stress that whilst keyhole liver surgery is to be preferred the surgeon's experience is key to improving outcomes.

It is therefore essential for the surgeon to be able to assess the risks and complexity associated with a given case to ensure that the right level of experience or type of surgery is applied for optimum success.

The team has interviewed 80 surgeons, covering over 7,000 cases (out of 9,000 in the world). It has identified the key factors that experienced surgeons believe make operations more difficult. Based on these findings, the team is proposing 'The Southampton Difficulty score for Laparoscopic Liver Surgery' be validated.

Armed with this knowledge and training, surgeons will be in a better position to assess whether Laparoscopic Liver Surgery is likely to be of benefit both based on patient circumstances and surgeon's experience.

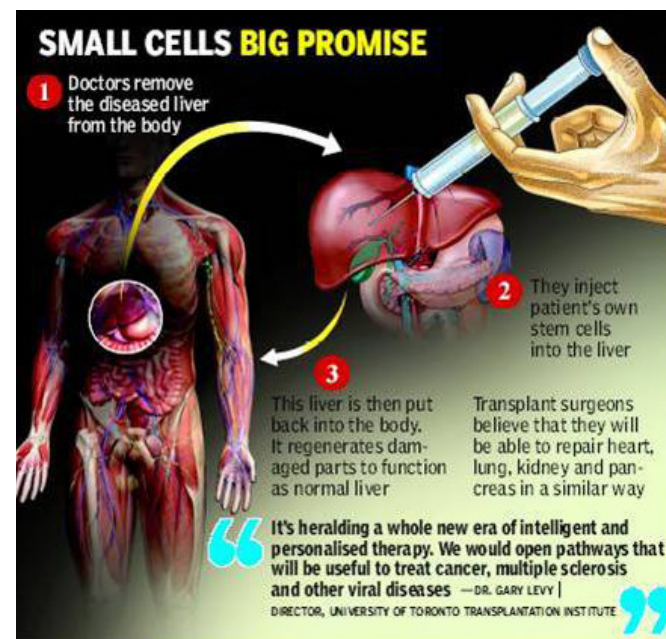
## Growing liver stem cells outside the body

Major milestones have been achieved on this research project on liver stem cells, carried out at Southampton University Hospital and funded by LAPR&D. The project aim is to grow and maintain functioning liver cells outside of the body. This will ultimately allow for earlier experimentation of new drugs on functioning livers with much reduced risks to patients.

The team has conducted 156 experiments in the last 2 years. It has worked on 119 samples from over 200 patients.

Critical to this achievement was the need to identify a way to grow the cells in three dimensions. Through collaboration with the School of Bio-Engineering at Southampton University, the team was able, using electromagnetic current, to successfully achieve this. Further investigations have identified that a clay gel seems to provide the right atmosphere for cells to grow and live.

The researchers have submitted their first paper to the Journal of Hepatology. The next steps are to evolve these stem cells to mature liver cells with full liver functions.



## Supporting CANCER UK in developing a national Tissue bank

We are delighted to be supporting Cancer UK in developing a National Tissue bank for Pancreatic Cancer. Southampton University Hospital is one of 6 centres in the UK contributing to the tissue bank.

Patient recruitment started in July 2017. The team will be collecting not only blood, urine and tissue samples from multiple organs, but also scans and clinical outcomes to provide a complete database of essential information for future research.

## Pancreatic cancer biomarkers research

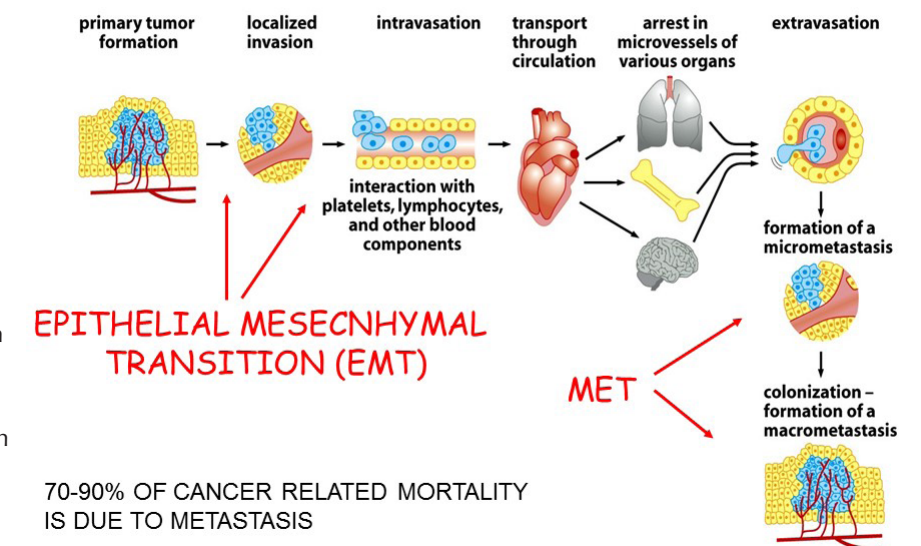
In late spring 2017, LAPR&D launched a new research project that aims to identify biomarkers of metastatic[1] Pancreatic cancer and investigate drugs targeting pancreatic cancer cells.

Pancreatic cancer continues to be difficult to diagnose at an early stage and treat; there are no biomarkers of metastatic pancreatic cancer and no drugs that specifically target pancreatic cancer cells.

The project has already made some progress. The research team has focused on understanding the different stages of cells and the minimum requirements to ensure meaningful tests. It concluded that the team required cells at each of the three stages of development (from well differentiated / good cells to less well differentiated cells) with the same genetics i.e. from the same patient.

The next stage of the project is to try and identify new drugs and concentration levels that can act in the right way on the different stages of the disease.

### How metastasis happens?



[1] Metastasis is the spread of cancer or other disease from one organ or part of the body to another without being directly connected with it.

## Improving nutrition in patients undergoing pancreatic surgery

The objective of this research project is to understand the role of pancreatic enzymes in patients undergoing pancreatic major surgery and identify ways to improve the tolerance to this drug.

Pancreatic enzymes are currently used after surgery to compensate for the lack of digestive enzymes that are normally generated by the head of the pancreas. During surgery (Whipple procedure), the head of the pancreas is removed and as a result the remaining part of the pancreas does not generate sufficient digestive enzymes to allow absorption of essential fats, proteins and vitamins. This results in weight loss, muscle wasting and abdominal discomfort.

The first stage of this project will investigate whether the use of Pancreatic Enzymes prior to surgery can improve patients ability to handle such an invasive procedure. It will look at the impact on morbidity, mortality and length of hospital stay. Trials will be conducted on 128 patients. The researchers will also measure the impact on key physical factors; nutritional assessment, bio-electrical impedance & handgrip strength.

The trial is expected to last 2 to 3 years, so that a meaningful volume of data can be collected and analysed.



## Turn it to Purple campaign

In November 2016 we participated for the first time in the Pancreatic Cancer UK "Turn it Purple" campaign. We obtained the fantastic support of Southampton City Council, the O2 Guildhall and Southampton FC who all turned their buildings purple for a week to help raise awareness of this underfunded and little understood disease.

We would like to thank everyone who stopped by at our stand in the foyer of Southampton City Council, donated, listened, signed up to our newsletter, agreed to take collection boxes and who liked our Facebook page as a result of the campaign. Look out for publicity via our website and social media for the 2017 campaign.