

Fallouh Healthcare wins funding to develop device providing early diagnosis of cardiac tamponade

Cardiac tamponade can come on quickly, diagnosis is difficult and subjective, and it can be confused with other sources of heart failure.

BIRMINGHAM, WEST MIDLANDS, UNITED KINGDOM, June 18, 2025 /EINPresswire.com/ -- Birmingham-based [Fallouh Healthcare](#) has been awarded a grant of £305,050 from Innovate UK as part of the Eureka Eurostars programme to finalise a prototype of PerDeCT™, working alongside their Austrian partner the

Medizinische Universität Wien, which aims to be the first device for monitoring cardiac function and early diagnosis of cardiac tamponade, a life-threatening complication after heart surgery.



Dr Hazem Fallouh, Consultant Cardiothoracic Surgeon and founder of Fallouh Healthcare

Although cardiac surgery is safe, cardiac tamponade can come on quickly – usually after the patient has left theatre, and typically late at night when the patient is in intensive care.

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*Hazem Fallouh,
Cardiothoracic Surgeon and
founder of Fallouh Healthcare*

It is caused by the accumulation of fluid and blood clots that compress the heart, and reduces its ability to pump blood, leading to a decrease in cardiac output and shock. Diagnosis is difficult and subjective, and it can be confused with other causes of heart failure.

PerDeCT is designed to monitor cardiac patients after surgery and provide early diagnosis of tamponade allowing a planned return to surgery to drain fluid and clots around

the heart.

The device consists of a probe and a balloon, which is placed in the pericardium (the sac around the heart) during surgery, and measures cardiac efficiency (cardiac output) as well as predicting the development of tamponade, by looking at the trend in the relationship between balloon inflation and cardiac efficiency. It can be withdrawn through the skin after the patient is recovered.

The award will fund a two-year programme of work by Professor Bruno Podesser, Cardiac Surgeon and Professor of Surgery at Medical University of Vienna, Austria, to develop a prototype according to Good Laboratory Practice standards, ensuring regulatory compliance.

He said “The PerDeCT device is like a smart drain we put in every patient. It solves two challenges we have coped with for years. Firstly, it balances the benefit and risk of using devices to monitor cardiac output, and secondly, it is able to detect tamponade easily, before the damage is done. The device is simple, and low cost, and we are excited to join Hazem Fallouh and his team on this exciting journey to make it available to patients.”

Fallouh Healthcare is already designing the first clinical trial for PerDeCT, which will take place in the UK and Austria. Following the clinical trial, PerDeCT will be on course for regulatory approval.

Fallouh Healthcare was founded by Birmingham-based Consultant cardiothoracic surgeon Dr Hazem Fallouh, who has worked in many centres of excellence in the UK, who has previously commercialised two award-winning innovations in cardiac surgery.

He said: “We invented PerDeCT because there are currently no devices that provide an accurate diagnosis, or indicate the patient is on a trajectory where tamponade is likely to occur. As many as 3 in 10 of all deaths that immediately follow post-cardiac surgery are thought to be due to tamponade and we are confident the device can save lives, improve patient outcomes, and reduce the overall costs of cardiac surgery.”

The company consists of a team that has first-hand experience of delivering surgical care, and aims to find solutions to address the daily challenges experienced by clinicians, and improve outcomes for cardiothoracic patients.

It has grown rapidly since its incubation at University of Birmingham Enterprise’s [Unit 9](#) biomedical incubator at [Birmingham Research Park](#), and expects to be fund-raising in the near future.

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