



Providing the future in  
heart attack prevention,  
*today*

— THE —  
HARLEY STREET CLINIC®  
part of HCA Healthcare UK

## GAME-CHANGING TECHNOLOGY



## Welcome



**WILL PRESSLEY**  
Chief Executive Officer  
The Harley Street Clinic & Leaders in Oncology Care

**As the first and only private healthcare provider in the UK to offer a revolutionary prediction technology for patients who are at risk of a fatal heart condition, it is a proud moment for The Harley Street Clinic and indeed for cardiac disease prevention in the UK.**

Every day in the UK, there are approximately 450 deaths due to a heart attack or cardiovascular disease,\* which occur when the heart's coronary arteries become narrowed or blocked. Up until now, medical professionals have not had a way to detect the underlying problems that could lead to a heart attack in the future – until now.

CaRi-Heart® is a new, first-of-its-kind technology which has the power to detect 'invisible' risks in people with possible heart disease, by performing a deeper dive into routine CT angiogram (CCTA) scans to reveal any 'red flags' that are hiding beneath their surface.

It works by using AI and deep-learning technology to produce a biomarker, the Fat Attenuation Index (FAI), which accurately measures inflammation of blood vessels in and around the heart; helping to identify any 'ticking-time-bomb' arteries that could potentially lead to a heart attack in future.

The technology offers hope and reassurance to people who have heart problems or a family history with heart disease, by allowing them to put preventative measures in place if they are deemed high risk of a heart attack in future.

Following a referral from a GP or cardiologist, patients can undergo this non-invasive scan at The Harley Street Clinic and receive their results within a matter of days. Those patients who receive a troubling result will then be recommended to one of our cardiologists, to receive a personalised prevention and management plan.

Renowned as a cardiac centre of excellence across the world, The Harley Street Clinic offers patients a vast range of prevention, management, and treatment options, as well as access to a team of leading cardiologists, clinical nurse specialists and cardiothoracic surgeons.

We are truly committed to making a lasting impact on the very real need to prevent cardiac disease in our country and our investment in the CaRi-Heart® technology for our patients, is a great example of this.

Available at:

The Harley Street Clinic  
88 Harley Street  
Marylebone  
London W1G 7HR

\* Source: British Heart Foundation

# Game-changing technology CaRi-Heart®

## THE UNMET NEED

Coronary artery disease (CAD) remains the leading cause of global mortality and is increasing, not least due to obesity and diabetes epidemics.

Atherosclerosis, the disease process that causes build-up of fatty material (plaque) inside the coronary arteries, is an inflammatory disease and plaque rupture (which causes heart attacks) is also driven by coronary inflammation.

Current cardiac imaging tests for CAD aim to detect narrowed arteries or the consequences of coronary narrowing (ischaemia), but this does not necessarily equate with risk, or with risk reduction after treatment.

Importance of coronary CT angiography as a first-line investigation for chest pain

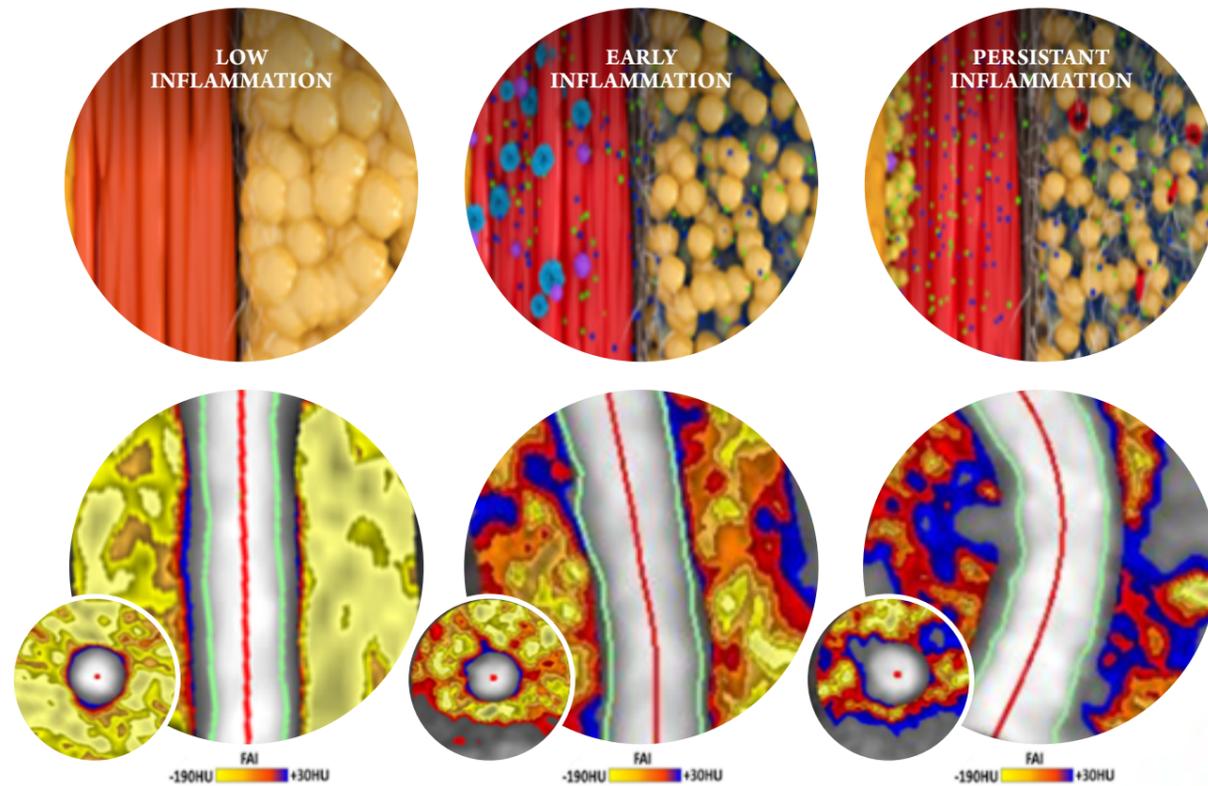
NICE guidelines recommend Coronary CT Angiography (CCTA) as the first-line investigation for patients with stable chest pain and suspected CAD.

Although most CCTAs do not identify any obstructive CAD, nearly two thirds of heart attacks occur in patients without a significant coronary narrowing.

Heart attacks or even death is often the first manifestation of CAD, due to rupture of unstable plaques.

A diagnostic test that accurately detects coronary inflammation would allow identification of people at risk of heart attacks who are currently missed.

FAI is a powerful predictor of cardiovascular risk, including death.



The CRISP-CT study, involving 4000 patients from Europe and the US, showed that patients with an abnormal FAI had a 6-9x higher risk for fatal heart attacks and 5x higher risk for non-fatal heart attacks.

Importantly, this was after adjusting for all conventional risk factors (e.g., smoking, age, diabetes, hypertension, coronary calcification).

The striking predictive power of FAI is also independent of 'high risk plaque features', currently reported on CCTA scans.

CaRi-Heart® is a comprehensive patient risk tool for more informed treatment decisions

CaRi-Heart® is an innovative technology for the diagnosis and treatment of CAD, providing information on heart attack risk. CaRi-Heart® analysis can be performed on any routine CCTA.

CaRi-Heart® integrates information related to coronary inflammation, clinical risk factors and atherosclerotic plaque burden to calculate **CaRi-Heart® Risk**, providing a personalised risk of the likelihood of the patient suffering a fatal heart attack.

Compared with current clinical risk scores, the CaRi-Heart® analysis, reclassifies heart attack risk in up to a third of patients who would not normally have that insight from a normal CCTA scan.

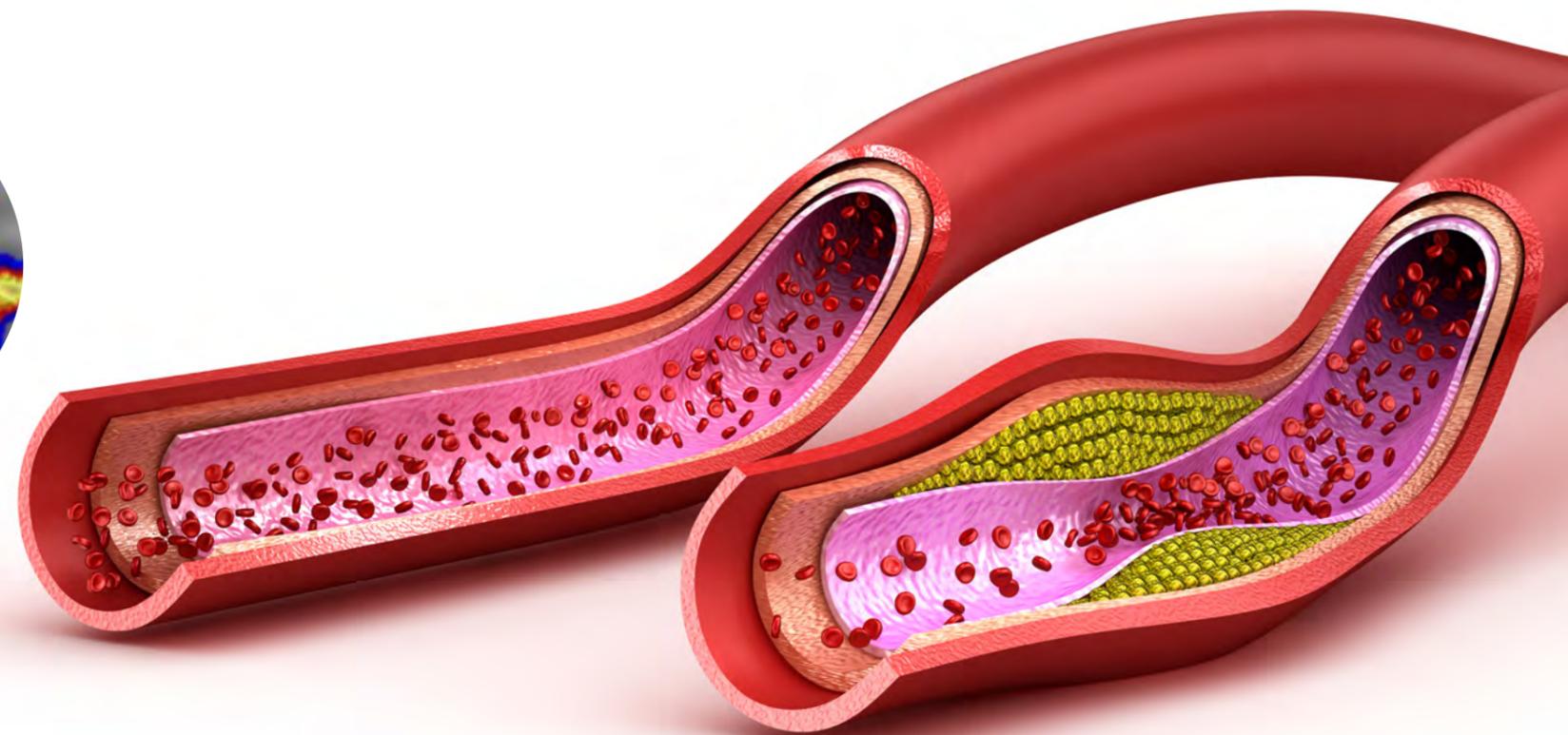
## Clinical Risk Score



## CaRi-Heart® Risk



● Low risk <1%    ● Intermediate risk ≥1% and <5%    ● High risk ≥5%



## What clinicians can expect

1. Patient attends clinic for CCTA scan
2. Referring clinician requests CaRi-Heart® analysis
3. Referring clinician sends risk factors to accompany CCTA request
4. CCTA scan sent to Caristo diagnostics for analysis
5. Patient's report returned in 48 hours
6. Report sent to referrer within 3 working days
7. Depending on your patient's risk profile:
  8. i. if referrer is a cardiologist, no recommendations provided
  9. ii. if referrer is a GP or other, we will recommend a referral to a HCA cardiologist with a specialist interest in primary prevention

### CARI-HEART® CORONARY INFLAMMATION AND RISK REPORT

#### Summary

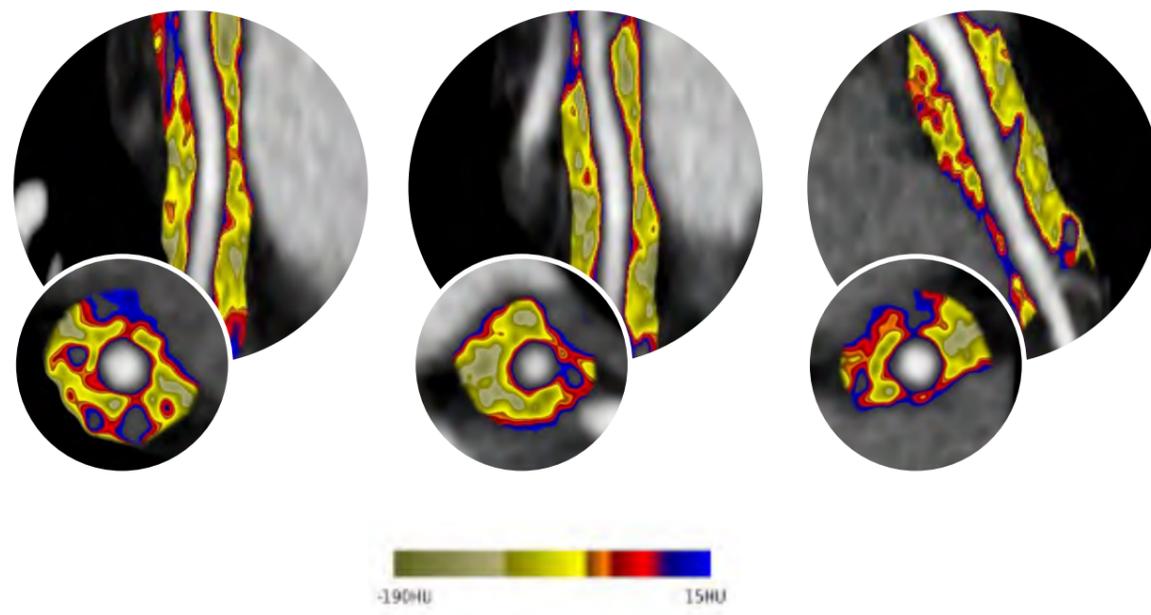
**FAI-Score**      **7.9 (26th percentile)**      **CaRi-Heart® Risk**      **15.2%**

This represents the weighted Fat Attenuation Index (FAI) of the coronary artery with the highest degree of inflammation.

This is the risk of a fatal cardiac event within the next 8 years.

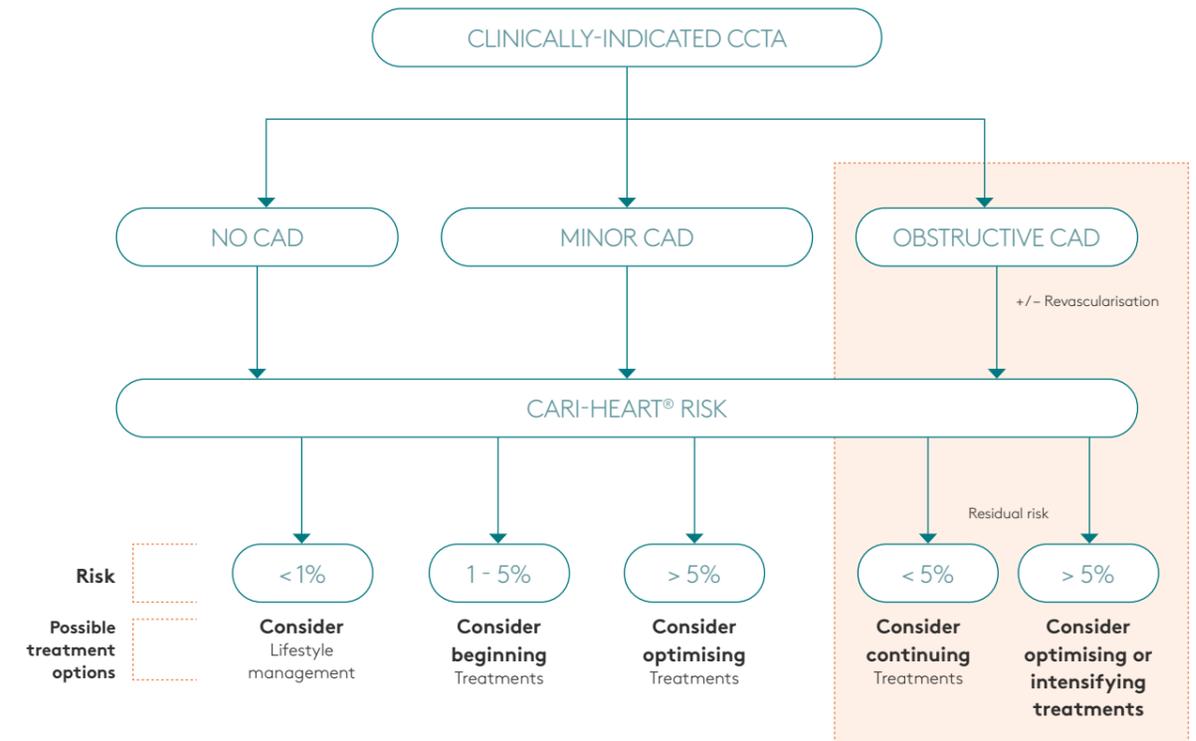
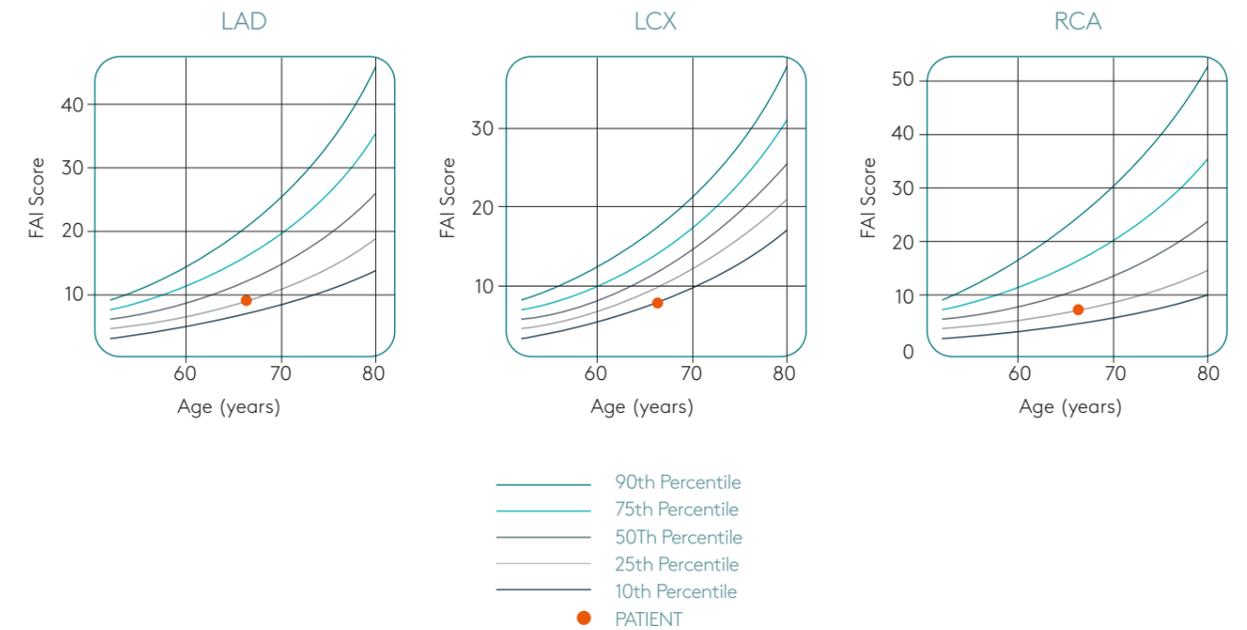
## Fat Attenuation Index (FAI)

INDIVIDUAL FAI VALUES ARE SHOWN IN HOUNSFIELD UNITS (HU) BELOW:



## FAI-Score

The overall FAI-Score is 7.9. This is based on the analysis of weighted perivascular Fat Attenuation Index (FAI) of the coronary artery with the highest degree of inflammation.



## Cardiac centre of excellence



### The Harley Street Clinic was the first private hospital the CQC rated 'Outstanding'.

Established almost 50 years ago, now with a worldwide reputation for cardiac excellence, The Harley Street Clinic cardiac centre is supported by a full complement of specialised cardiac physiologists, radiographers and nurses working alongside one of the country's largest and most well respected teams of cardiologists, cardiac surgeons and radiologists.

Being part of a large acute hospital, the centre is supported by some of the most up-to-date diagnostic and imaging equipment including 3D echo, cardiac MRI, myocardial perfusion scanning, and of course, the highest precision image resolution and lowest dose radiation cardiac CT scanner in the UK.

### Services & facilities

- Level-3 intensive care unit – the highest level of comprehensive critical care
- The very latest imaging and diagnostics, including cardiac CT (Siemens Somatom Force) and MRI, trans-oesophageal echocardiograms, CT-FFR, myocardial perfusion scanning, and optical coherence tomography (OCT)
- Cath labs and theatres for interventional treatments including EP, pacing, TAVI, and PCI

### Some of The Harley Street Clinic treatments

- General cardiology risk assessment, screening
- Minimally invasive procedures TAVI, mitraclip, complex revascularisation including complex percutaneous coronary intervention (PCI) and Shockwave (lithotripsy), AF ablation (cryo/carto/ radiofrequency), pacemakers and implantable cardiac devices, leadless pacemakers, angiography, angioplasty – balloon and stenting
- Minimal access surgery mini mitral & tricuspid valve repair, MIDCAB, atrial septal defect & PFO closure, mini AVR
- Open surgery aortic, mitral, tricuspid and pulmonary valves, congenital, coronary – including coronary artery bypass graft (CABG)
- Vascular open abdominal aortic aneurysm repair, endovascular repair of aortic aneurysms (EVAR), thoracic endovascular repair (TVAR), carotid endarterectomy, varicose veins, DVT, peripheral arterial disease, thoracic outlet syndrome
- Inherited conditions – genetics

## Price and how to refer



Our service has a dedicated clinical team who manage all patient bookings. The phone is answered and the appointment is booked by one of our cardiac radiographers. You have full peace of mind your enquiry is being dealt with by our clinical team who can answer any queries you might have and quickly arrange a same day scan and report for you .

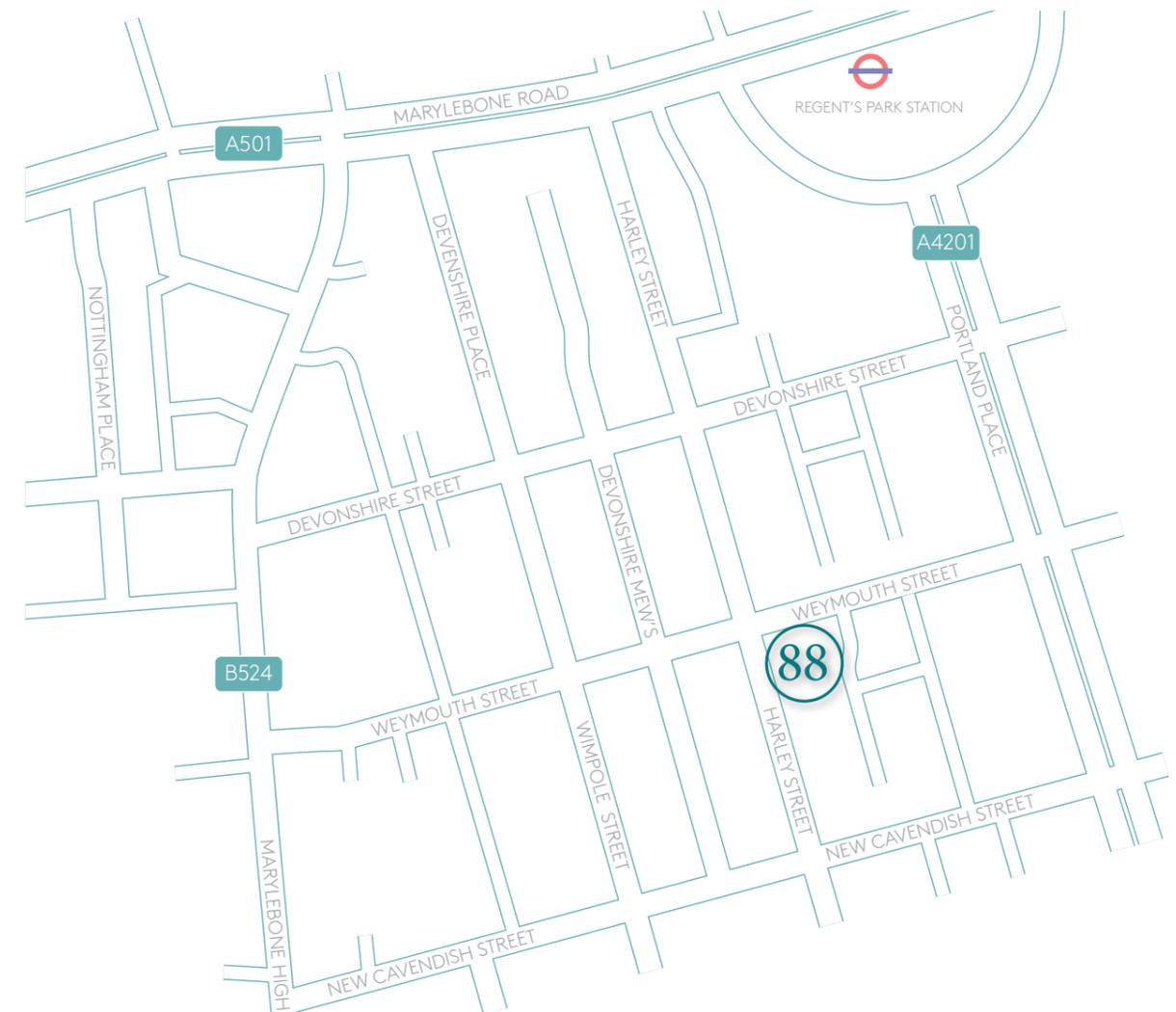
The Harley Street Clinic

88 Harley Street  
Marylebone  
London W1G 7HR

020 7053 6107

cardiacct@hcahealthcare.co.uk

Currently only available for self funding patients. Price is £495.



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