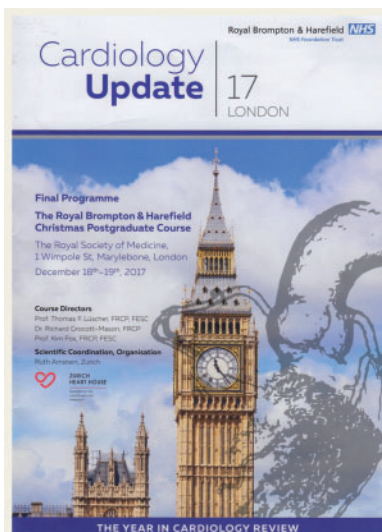


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# Cardiology Update London 2017, I

**A comprehensive review of the year in cardiology at the prestigious Royal Society of Medicine in London, at Christmas. An inaugural meeting**



Cardiology is a moving field—indeed, during the last decades we have witnessed an enormous growth of knowledge about cardiovascular conditions leading to novel treatment options and improved outcomes in patients with heart disease—and the progress continues on a yearly basis. Thus, physicians must be *up-to-date* on the most recent developments in the diagnosis and treatment of cardiac diseases. This set the stage for the first Cardiology Update London, held on 18–19 December 2017 at the *Royal Society of Medicine* at Wimpole Street in the centre of London (Figures 1 and 2) organized by the Royal Brompton and Harefield Hospitals and the *Zurich Heart House* ([www.zhh.ch](http://www.zhh.ch)).

This novel, from now on a yearly postgraduate course reviewed the most important developments of cardiovascular medicine, in particular, prevention, coronary artery, valvular heart disease, and heart failure over a 2-day period.

## The future of cardiology



The course was opened by the president of the *European Society of Cardiology*, Jeroen Bax, with a lecture on the future of cardiology. He pointed out the impressive achievements of this specialty, but also the threats ahead of us that must be considered. Specifically, he drew the attention of the audience to the increasing economising of medicine in general, and of cardiology in particular. With that came the increasing



Physician organisers of Course (L) to (R) Richard Grossett-Mason, Kim Fox, Thomas F. Lüscher, with Jeroen Bax



Panos Vardas with Patrick Serruys

influence of administrators in medical institutions which more and more threatens the traditional role of the physician as the decision maker in patient care. In education, the sponsorship of pharma and the device industry, which has so far been essential to maintain high quality courses is also changing. MedTech Europe, which represents the medical technology industries in Europe has made a first step and as of 2018, will no longer directly support educational activities of physicians. Whether and how they will further support educational programmes and whether the pharma industry will follow their example in the future remains to be seen. Therefore, the challenges ahead need thoughtful consideration and appropriate actions.

## Prevention

The course continued with a review of the 2016 ESC Guidelines by David Wood, but also the new treatment options in lipid management through the introduction of PCSK9 inhibitors by Kausik Ray. He also particularly stressed RNA interference as a completely new treatment strategy in this context and in medicine at large. Novel diabetes drugs were discussed by Naveed Sattar from Glasgow. The new sodium-glucose-transport inhibitors for the first time showed a convincing reduction of mortality in diabetic patients. John Deanfield then reminded the audience of the importance of considering life-time risk in prevention. The session ended with a new concept in prevention outlined by Thomas F. Lüscher, i.e. the microbiome. Indeed, our body contains 3 trillion microbial organisms and they eat what we eat, and we absorb what they digest (Figure 6). Thus, the microbiome and its composition provide new insights into atherosclerosis and its complications.

## Coronary disease

Coronary artery disease remains a centre piece of cardiology and the 2017 ESC Guidelines on STEMI, as reviewed by Anthony Gershlick

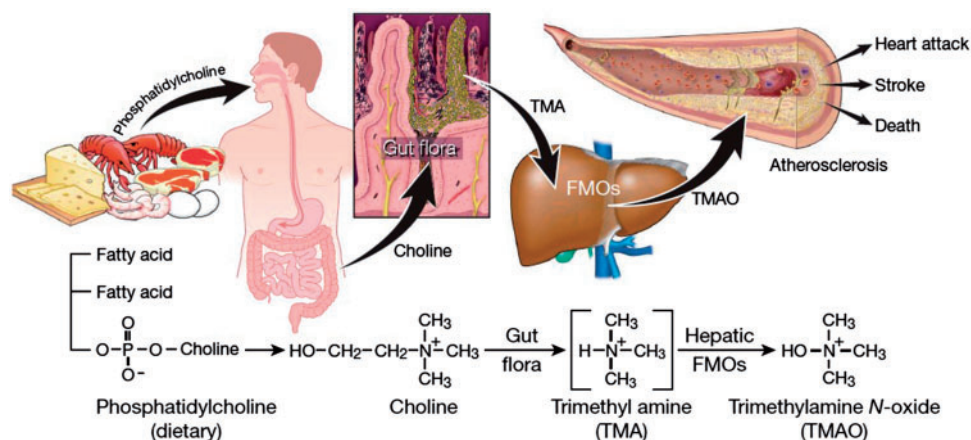
from Leicester, update the current management of its acute presentation. Tako Tsubo syndrome, although rare, is an under-recognized acute condition that may present as a STEMI and also bears a considerable morbidity and mortality risk as Thomas F. Lüscher reminded the audience. The antiplatelet and antithrombotic management in coronary artery disease is well established, but its duration and combination remain a challenge as outlined by Gabriel Steg. Risk scores such as the DAPT score among others may help physicians in this context.

## Atrial fibrillation

Atrial fibrillation is an increasing problem in an aging society, but its management has made enormous progress by the introduction of ablation technologies as reviewed by Vias Markides and Sabine Ernst from the Brompton Hospital, while the role of antiarrhythmic drugs has declined as John A. Camm reminded the audience. On the other hand, the importance of anticoagulants, in particular, that of novel oral anticoagulants or NOACs in stroke prevention is well established as Paulus Kirchhof, the author of the 2016 ESC Guidelines outlined.

## Valvular heart disease

Valvular heart disease has reached centre stage with the introduction of transcatheter valve implantation or TAVI as reviewed by Miles Dalby from Harefield Hospital. The role of imaging is particularly important in this context as Jeroen Bax pointed out both for the selection of patients and valves, mainly the use of CT scans, and for their follow-up with echocardiography. While TAVI has established itself as a valuable treatment strategy in high and intermediate risk patients, its indications are expanding as Simon Davies predicted, based on the excellent results the procedure currently has. The mitral valve on the other hand is much more complex, as Robert Smith from the Harefield Hospital pointed out. The MitraClip is currently the most commonly performed interventional procedure for mitral



Gut flora dependent metabolism of dietary PC and atherosclerosis. Schematic summary illustrating newly discovered pathway for gut flora mediated generation of pro-atherosclerotic metabolite from dietary phosphatidylcholine (PC) also known as lecithin. From Wang *et al.* Nature 2011;472:57–63. doi: 10.1038/nature09922.

regurgitation with an impressive safety and symptomatic relief, while its effects on outcome are still uncertain.

## Heart failure

Heart failure is a growing field and accordingly two sessions were devoted to the topic. The 2016 ESC Guidelines distinguish heart failure with reduced (HFrEF), mid-range (HFmrEF), and preserved ejection fraction (HFpEF). While HFrEF is decreasing thanks to timely and effective revascularization of myocardial infarction, HFpEF is increasing due to the increasing age and the obesity epidemic in Western societies and is associated with a range of comorbidities as outlined by Teresa McDonagh from Kings College London. Genetics have primarily helped in understanding and risk-stratifying dilated cardiomyopathies as James Ware indicated.

In his *Philipp Poole-Wilson Lecture* Milton Packer from Dallas presented a novel concept of HFpEF in obese individuals. He reminded the audience that fat cells, particularly those of visceral fat, produce hormone adipokines and enzymes such as aldosterone, leptin, and neprilysin. All of those are highly expressed in obesity and lead to an



increased circulatory volume, inflammation, and fibrosis particularly in the myocardium and the kidneys. This leads to stiff ventricles unable to cope with the increased circulatory volume and renal dysfunction, a typical comorbidity of HFpEF. Of note, the new sodium-glucose transport inhibitors reduce leptin, an effect that may explain their surprising protection from heart failure hospitalisations. Taken together, this sets the basis for novel treatment strategies in HFpEF, a condition that has so far remained a therapeutic challenge.

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## Cardiology Update London 2017, II

### Bringing the spirit of Davos to London during the Christmas festive season

With the assumption of Thomas Lüscher's new position as Director of Research, Education, and Development at the Royal Brompton and Harefield Hospitals in London, England it was almost an obligation to initiate an inaugural postgraduate course for cardiology. Without doubt, it should be an offspring of the well-known Cardiology Update course founded in 1975 in Davos, Switzerland and held there every second year.

The new Cardiology Update Christmas postgraduate course should take place at a central location in London and wrap up the year in cardiology in 2 days. This framework, location and the short notice with a planning phase of only 3 months represented a real challenge for the team of the Zurich Heart House, which was assigned to organise the meeting at a high-quality level. The prestigious Royal Society of Medicine (RSM) building at Wimpole Street close to Oxford Circus turned out to be the ideal location and was also available in the last week before Christmas.



Richard Groscoff-Mason, Kim Fox, Jeroen Bax and Thomas F. Lüscher (L to R)



RSM Atrium, meeting area

The support of the two course directors in London, Kim Fox, and Richard Groscott-Mason was crucial in the selection and invitation of a distinguished teaching faculty. The hot topics which had an impact on cardiology practice during the 2017 year were prevention, angina and ACS, atrial fibrillation, valvular heart disease, and heart failure. A renowned teaching faculty consisting of 35 opinion leaders, the majority academic cardiologists from London but also leading cardiologists from Europe and the USA, including the president of the ESC, Jeroen Bax contributed to an outstanding programme. Furthermore, the lectures were illustrated with interactive patient cases and live in-a-box features presented by young cardiologists.

Despite the rather late announcement, approximately 100 delegates attended the Cardiology Update London, the majority coming from the UK, but also from European countries and overseas, including Canada, Egypt, Philippines, and Kenya. Several residents and students from the greater London area benefited from the special registration arrangement for the younger generation.



Ruth Amstein with young Swiss cardiologists



Sir Magdi Yacoub with Miles Darby



Young cardiologists during coffee break

A special acknowledgement is attributed to the generous support with an unrestricted educational grant by seven pharmaceutical and device companies (A. Menarini, Amgen, Bayer, Biotronik, Daiichi-Sankyo, Sanofi and Boston Scientific). Their collaboration was highly appreciated and provided a solid basis for the successful kick-off of the meeting.

Cardiology Update London will be held on a yearly schedule as a Christmas Postgraduate Course in December with hopefully an increasing reputation and a growing number of participants. Further information is available on the website [www.cardiologyupdate.uk](http://www.cardiologyupdate.uk).



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## Opiate use in the Cath Lab

### A transatlantic divide and new focus of research

Good clinical practice demands the appropriate treatment of pain, particularly among patients undergoing invasive procedures such as the ones now commonplace in cardiac catheterization labs around the world. However, study of international catheterization lab practice patterns suggests that significant geographical variation exists in the use of analgesia during coronary angiography and percutaneous coronary intervention (PCI).<sup>1</sup>

This is particularly true for opiates. For example, survey results suggest that as many as 92% of patients routinely receive sedation (most

commonly comprising a benzodiazepine and an opiate, typically fentanyl) for these procedures in North America.<sup>1</sup> Comparatively, only 38% of cardiologists in Europe (and other parts of the world) report administering any sedation to their catheterization lab patients.

The routine administration of fentanyl in US catheterization labs, and particularly the co-administration of fentanyl with midazolam for sedation purposes is seldom questioned. However, given the infrequency of opiate use in many non-US interventional cardiology settings, the following questions emerge: