High-sensitivity troponin

THE WAY THAT TROPONIN TESTS ARE REPORTED IS CHANGING, AND THIS WILL HAVE AN IMPORTANT IMPACT ON THE CLINIC USE OF THIS INFORMATION. THIS IS A QUICK GUIDE TO THE IMPORTANCE AND USE OF TROPONIN IN THE ASSESSMENT OF PATIENTS PRESENTING ACUTELY TO THE OXFORD RADCLIFFE HOSPITALS NHS TRUST.

Important points to note:

1. Troponin assays have been validated in the assessment of **acute chest pain due to suspected myocardial ischaemia** – NOT for atypical chest pain, pleuritic chest pain, musculoskeletal injury etc. Troponin should NOT be requested unless the clinical suspicion is of ischaemic chest pain
2. **Troponin will now be detectable in the "normal" population**, and will be reported in the **new units of ng/L** (an order of magnitude lower than before).
3. The universal definition of myocardial infarction states a troponin concentration above the 99th centile of the distribution expected in a normal population should be used as a positive "cut-off". This is different for men and women, and there will therefore be **sex-specific positive threshold values** of:
   - **≥17 ng/L for women**
   - **≥34 ng/L for men**
4. If you **suspect a patient is presenting with chest pain due to myocardial ischaemia**, then **please follow the flow chart opposite** for guidance on how to use the new assays in clinical practice – this will lead to the early triage of patients who clearly need admission, and will allow the safe discharge of patients at low risk earlier (often without having to wait for repeat troponin samples). **The Cardiology Advanced Nurse Practitioners will be available to assist** with this process and to facilitate appropriate urgent investigations and admissions.
5. If **troponin is elevated above the sex-specific threshold, but the patient is not presenting with chest pain due to suspected myocardial ischaemia** (you might argue this patient should not have had a troponin measured), then **this is NOT a type 1 myocardial infarction** (i.e. due to atherosclerotic plaque rupture/thrombosis) and **"ACS" treatment has not been demonstrated to reduce risk**. Here it should be considered as a marker of general risk/illness, and perhaps best thought of as ***myocardial injury***. Alternative causes of cardiac stress/strain should be sought i.e. infection, PE, cardiac failure, valvular disease, myocarditis, contusion….. and treated appropriately. **The patients should be referred to the appropriate team for consideration of investigation and admission i.e. General Medicine or General Surgery.**