

## **Treatment of Complex Coronary Artery Disease Understanding the SYNTAX Trial and its Implications for Current and Future Clinical Practice**

- 1) Understanding factors related to mortality and clinical outcomes in the percutaneous and surgical arms of the SYNTAX Trial are required to understand the potential implications of the SYNTAX Trial for current and future clinical practice. [This thesis]
- 2) Incomplete revascularisation has a negative impact on long-term clinical outcomes following percutaneous or surgical based revascularisation; quantification of a level of reasonable revascularisation using SYNTAX based tools allows for the determination of a threshold value of incomplete revascularisation that would not have a negative impact on long-term mortality and other clinical outcomes. [This thesis]
- 3) Pluralitas non est ponenda sine necessitate (entities should not be multiplied unnecessarily). [Ockam's razor and the law of parsimony] The phenotypical expression of risk factors, such as diabetes or peripheral vascular disease, are more important determinants in predicting long-term mortality and decision making between surgical and percutaneous based revascularisation, rather than the actual presence of the risk factor. [This thesis]
- 4) In subjects with complex coronary artery disease undergoing percutaneous coronary intervention (PCI), female gender is an independent predictor of long-term mortality, and plays a role in decision making between coronary artery bypass graft (CABG) surgery and PCI. [This thesis]
- 5) Decision making between CABG and PCI requires objective, clinical tools that account for anatomical and clinical factors for the individual patient to aid the heart team to reach a consensus in open dialogue with the patient. [This thesis]
- 6) "If I go out into nature, into the unknown, to the fringes of knowledge, everything seems mixed up and contradictory, illogical, and incoherent. This is what research does; it smooths out contradictions and makes things simple, logical, and coherent." [Albert Szent-Gyorgyi, Hungarian physiologist].
- 7) "Because of its all-comers design, SYNTAX is undoubtedly the most definitive and compelling of all the trials of CABG versus PCI...SYNTAX will continue to shape both clinical practice and guidelines and should, by emphasising that treatment recommendations need to be made by a heart team rather than an individual practitioner, ensure the most appropriate interventional strategy for individual patients." [Professor David Taggart, Oxford, United Kingdom]
- 8) "The hope is that better predictions lead to better clinical decisions regarding diagnostic and treatment strategies, and finally to better outcomes...my prediction is that prediction research will often be in the spotlight in the coming years." [Professor Ewout W Steyerberg, Rotterdam, The Netherlands – my promoter]
- 9) "Very complex coronary artery disease is like Alzheimer's disease – once established, treatment is difficult, irrespective of the revascularisation modality. Our emphasis needs to focus on secondary prevention, as well as treatment, at a much earlier stage..." [Professor Patrick W Serruys, Rotterdam, The Netherlands – my promoter]
- 10) We are what we repeatedly do. Excellence is not an act, but a habit. [Aristotle]
- 11) Success is not final...failure is not fatal...it's the courage to continue that counts... [Sir Winston Churchill]