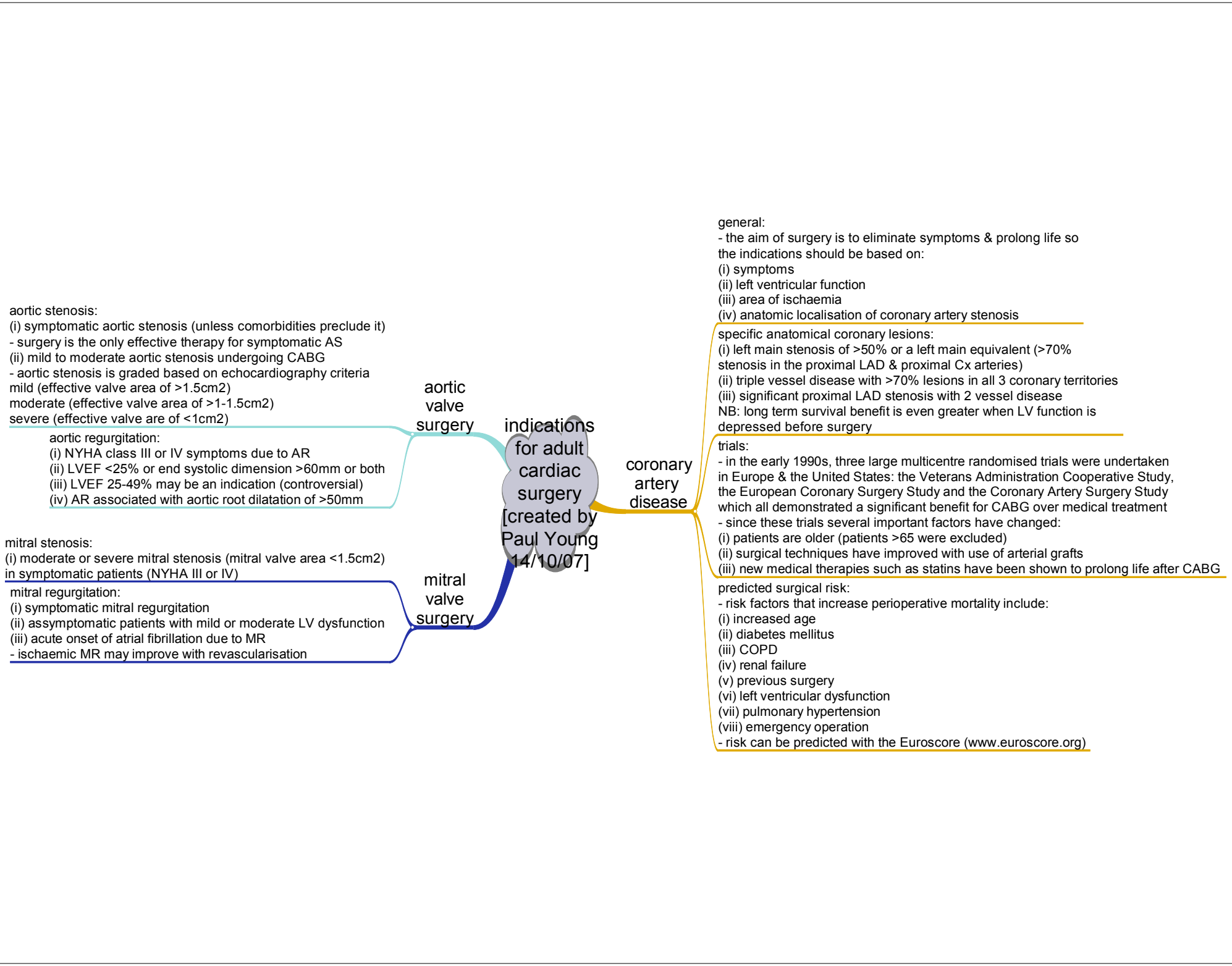
indications for adult cardiac surgery [created by Paul Young 14/10/07]
aortic valve surgery
aortic stenosis:
(i) symptomatic aortic stenosis (unless comorbidities preclude it)
- surgery is the only effective therapy for symptomatic AS
(ii) mild to moderate aortic stenosis undergoing CABG
- aortic stenosis is graded based on echocardiography criteria
mild (effective valve area of >1.5cm2)
moderate (effective valve area of >1-1.5cm2)
severe (effective valve are of <1cm2)
aortic regurgitation:
(i) NYHA class III or IV symptoms due to AR
(ii) LVEF <25% or end systolic dimension >60mm or both
(iii) LVEF 25-49% may be an indication (controversial)
(iv) AR associated with aortic root dilatation of >50mm
mitral valve surgery
mitral stenosis:
(i) moderate or severe mitral stenosis (mitral valve area <1.5cm2)
in symptomatic patients (NYHA III or IV)
mitral regurgitation:
(i) symptomatic mitral regurgitation
(ii) assymptomatic patients with mild or moderate LV dysfunction
(iii) acute onset of atrial fibrillation due to MR
- ischaemic MR may improve with revascularisation
coronary artery disease
general:
- the aim of surgery is to eliminate symptoms & prolong life so
the indications should be based on:
(i) symptoms
(ii) left ventricular function
(iii) area of ischaemia
(iv) anatomic localisation of coronary artery stenosis
specific anatomical coronary lesions:
(i) left main stenosis of >50% or a left main equivalent (>70%
stenosis in the proximal LAD & proximal Cx arteries)
(ii) triple vessel disease with >70% lesions in all 3 coronary territories
(iii) significant proximal LAD stenosis with 2 vessel disease
NB: long term survival benefit is even greater when LV function is
depressed before surgery
trials:
- in the early 1990s, three large multicentre randomised trials were undertaken
in Europe & the United States: the Veterans Administration Cooperative Study,
the European Coronary Surgery Study and the Coronary Artery Surgery Study
which all demonstrated a significant benefit for CABG over medical treatment
- since these trials several important factors have changed:
(i) patients are older (patients >65 were excluded)
(ii) surgical techniques have improved with use of arterial grafts
(iii) new medical therapies such as statins have been shown to prolong life after CABG
predicted surgical risk:
- risk factors that increase perioperative mortality include:
(i) increased age
(ii) diabetes mellitus
(iii) COPD
(iv) renal failure
(v) previous surgery
(vi) left ventricular dysfunction
(vii) pulmonary hypertension
(viii) emergency operation
- risk can be predicted with the Euroscore (www.euroscore.org)