

**Ischemická
choroba srdeční a
infarkt myokardu
Patofyziologické
základy**

Kardiovaskulární onemocnění

Dle odhadů WHO :

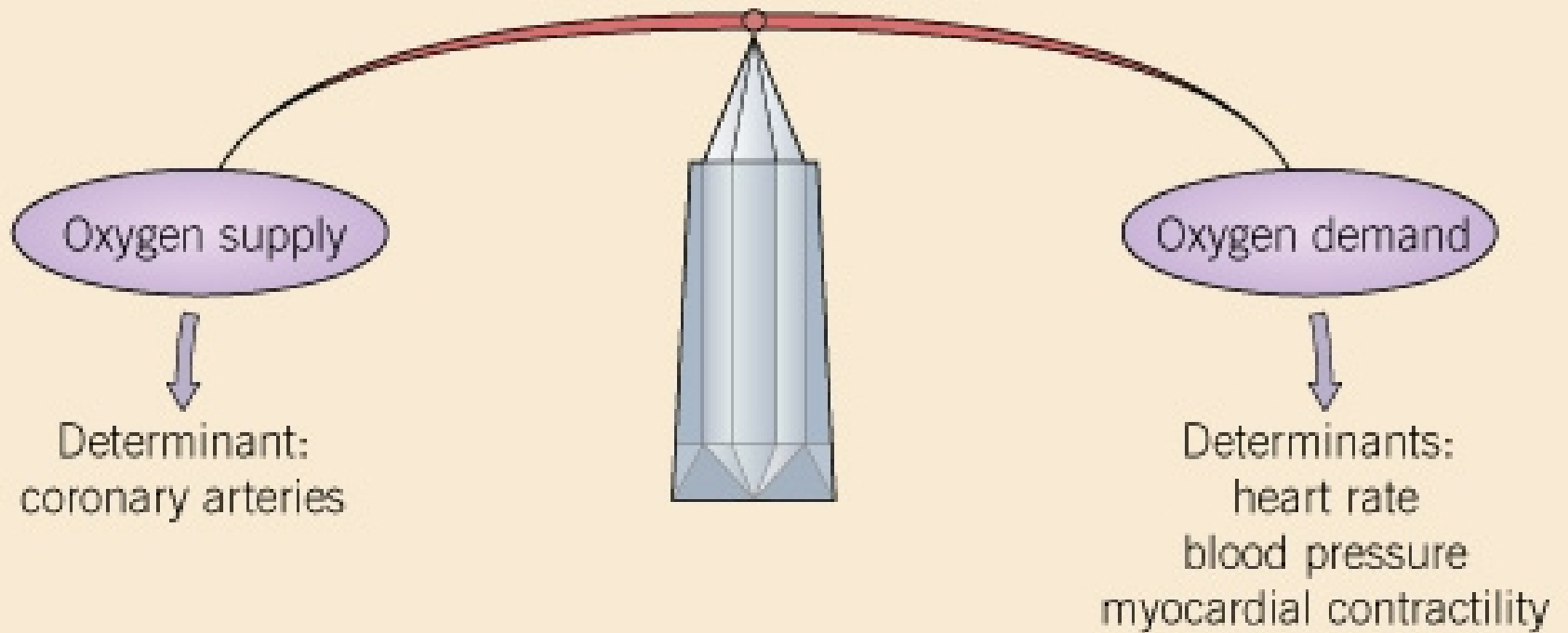
- 16.6 million lidí zemře na KVO na celém světě každý rok
- ICHS je přibližně 3 nejčastější příčinou úmrtí

In 2001:

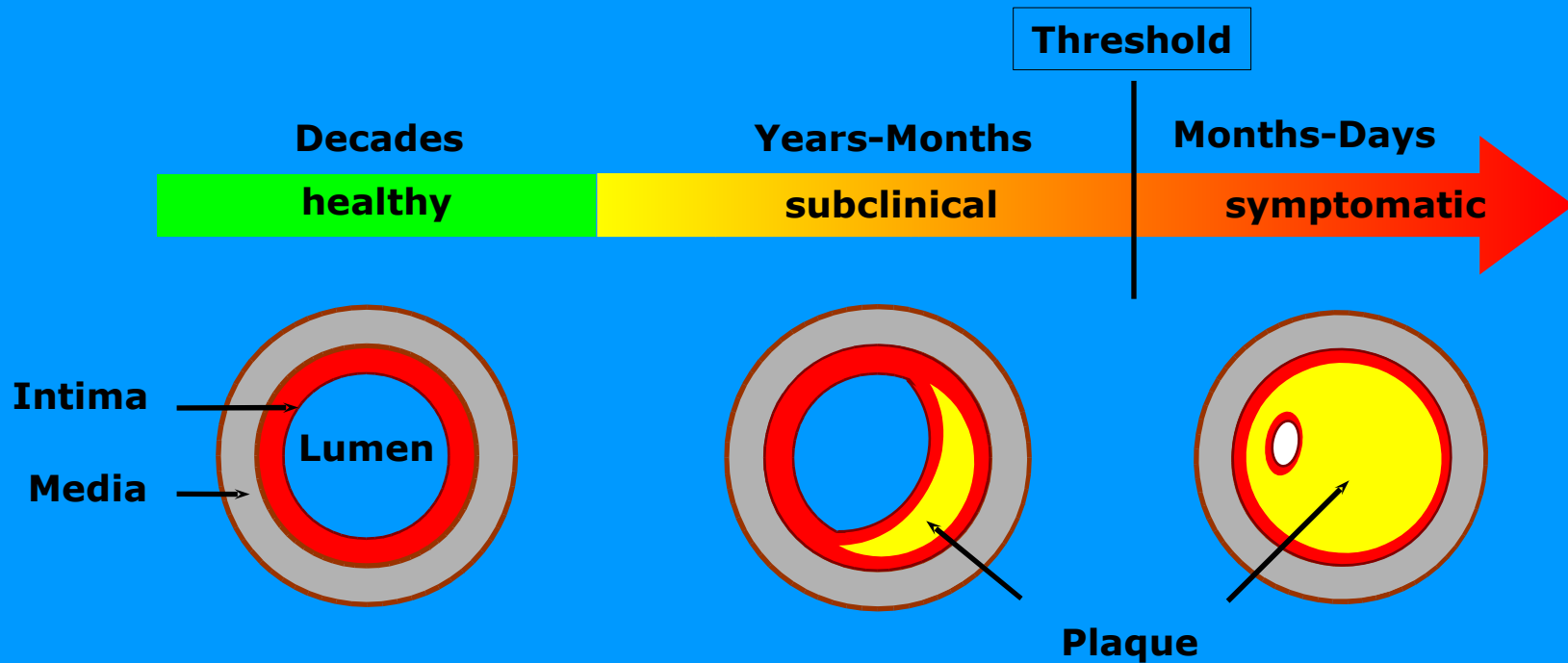
- 7.2 million úmrtí na ICHS
- 5.5 million úmrtí na CMP

Klinická péče o nemocné s KVO je nákladná a dlouhodobá

MYOCARDIAL OXYGEN BALANCE AND ITS DETERMINANTS

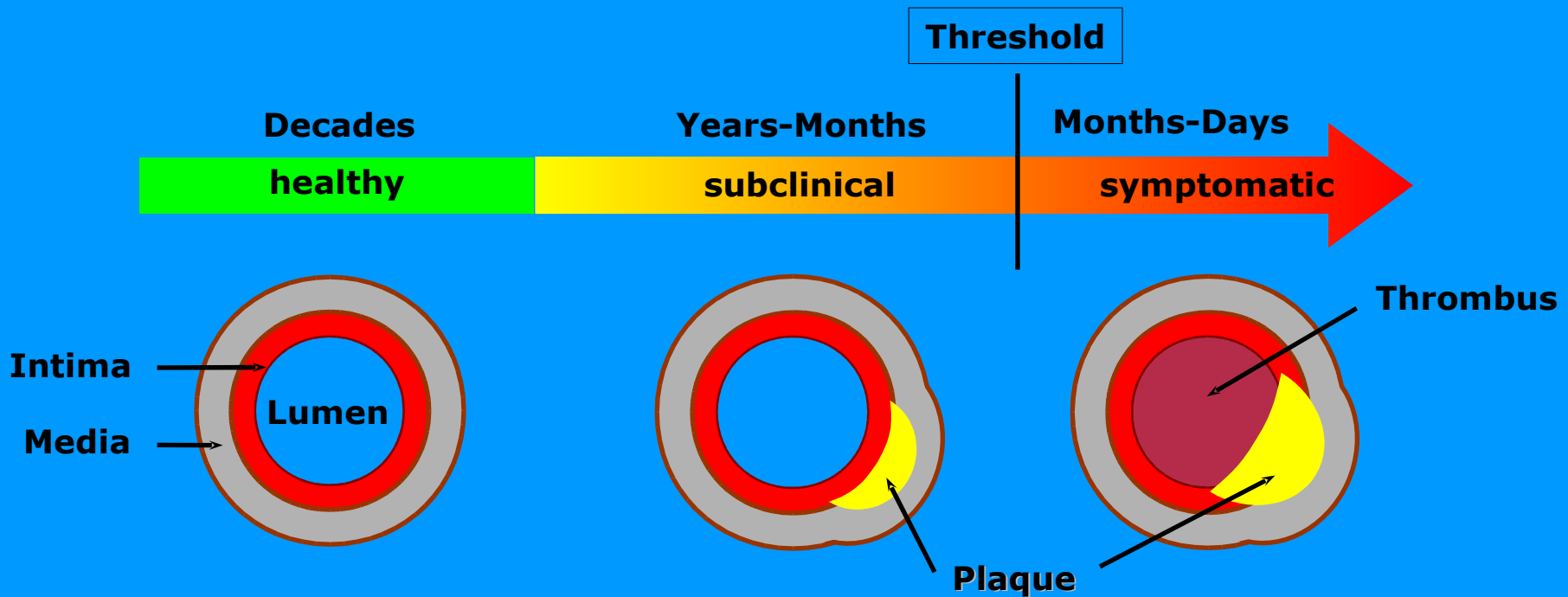


Chronický model aterogeneze



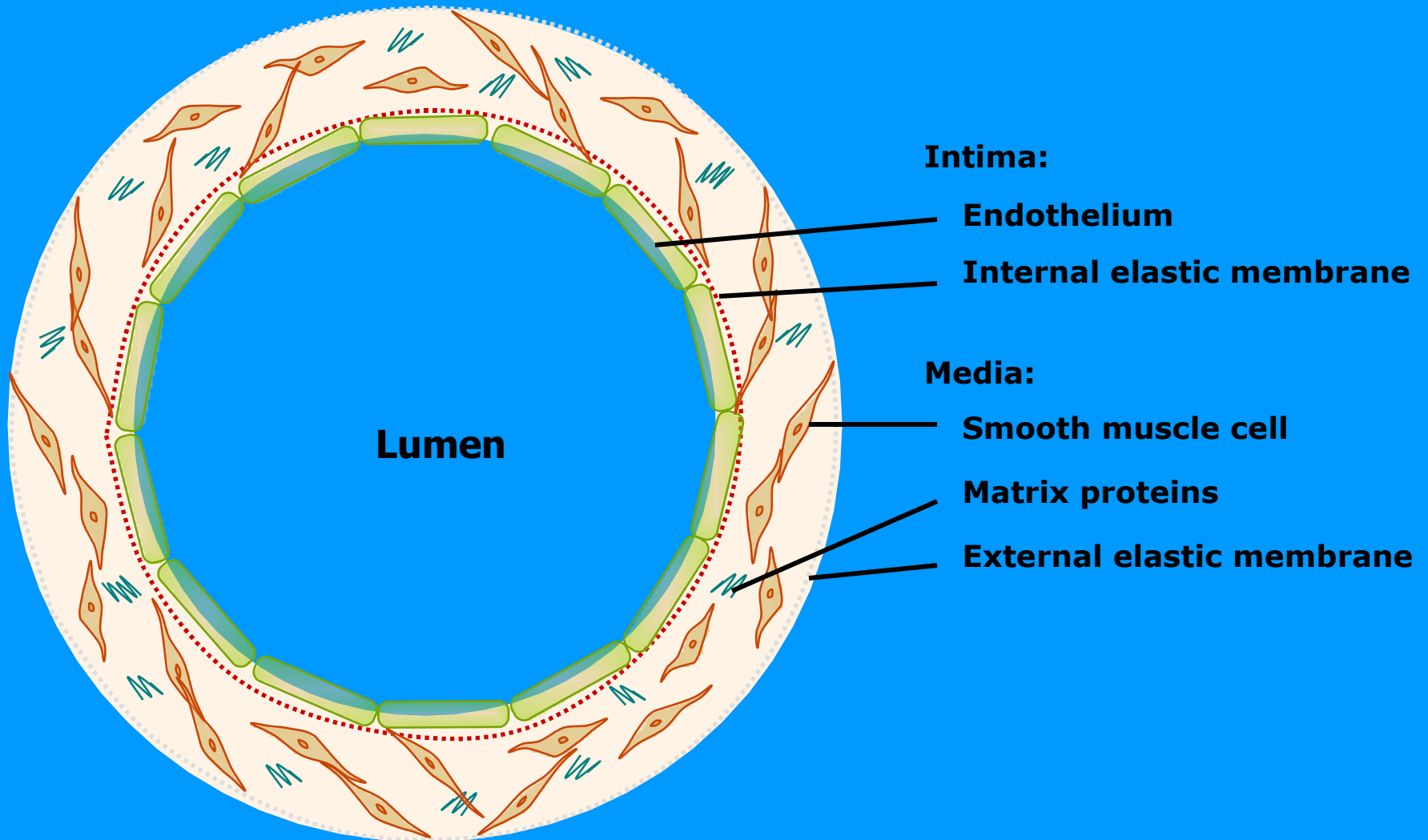
- Stable angina
- Stable plaques with narrowing
- Simple diagnostic (ECG, angiography)
- Rare MI
- Easy to treat

Akutní model aterogeneze

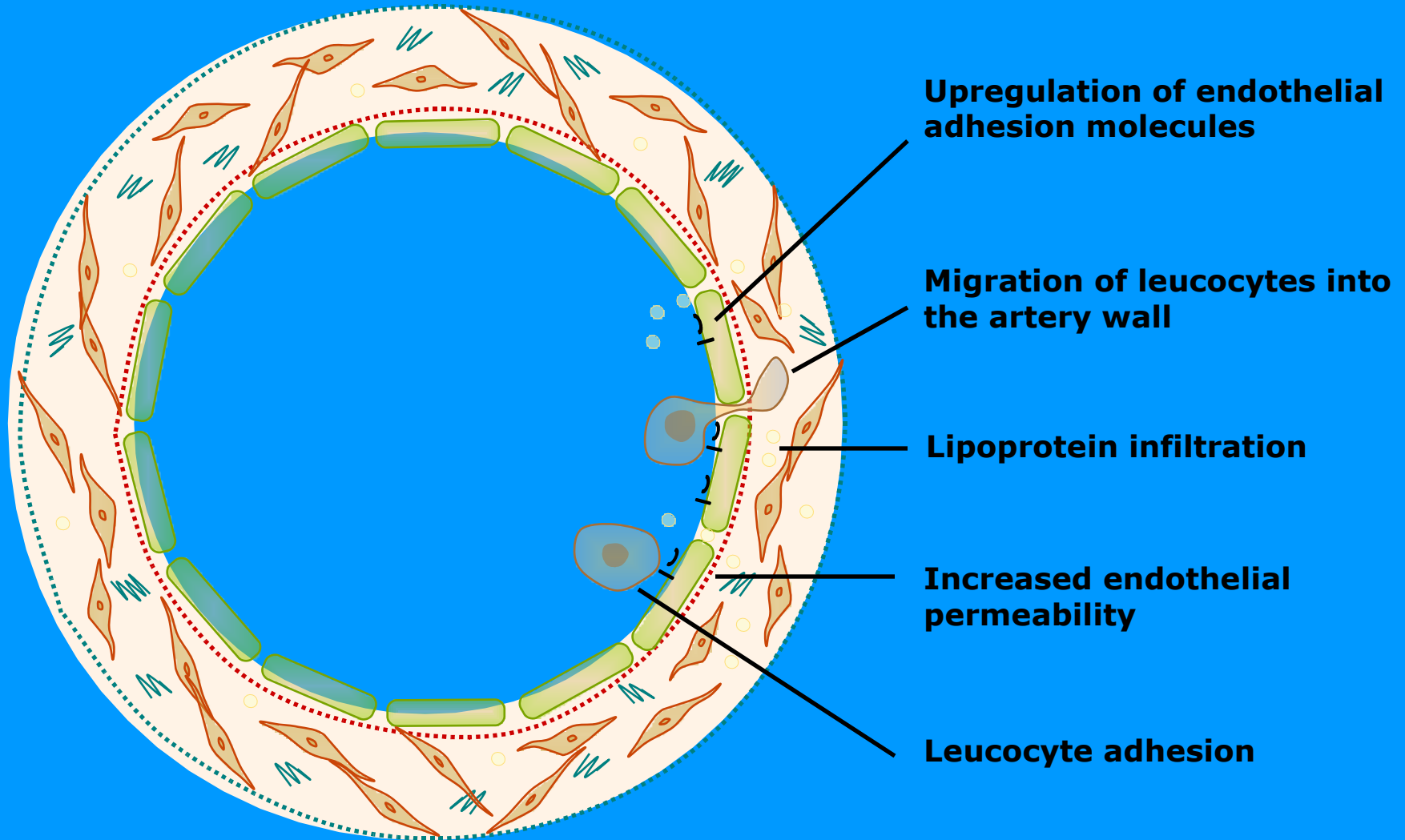


- **Unstable angina**
- **Unstable plaque no narrowing**
- **Difficult to diagnose (IVUS, MRI)**
- **Frequent MI with sudden death**
- **Easy to prevent**

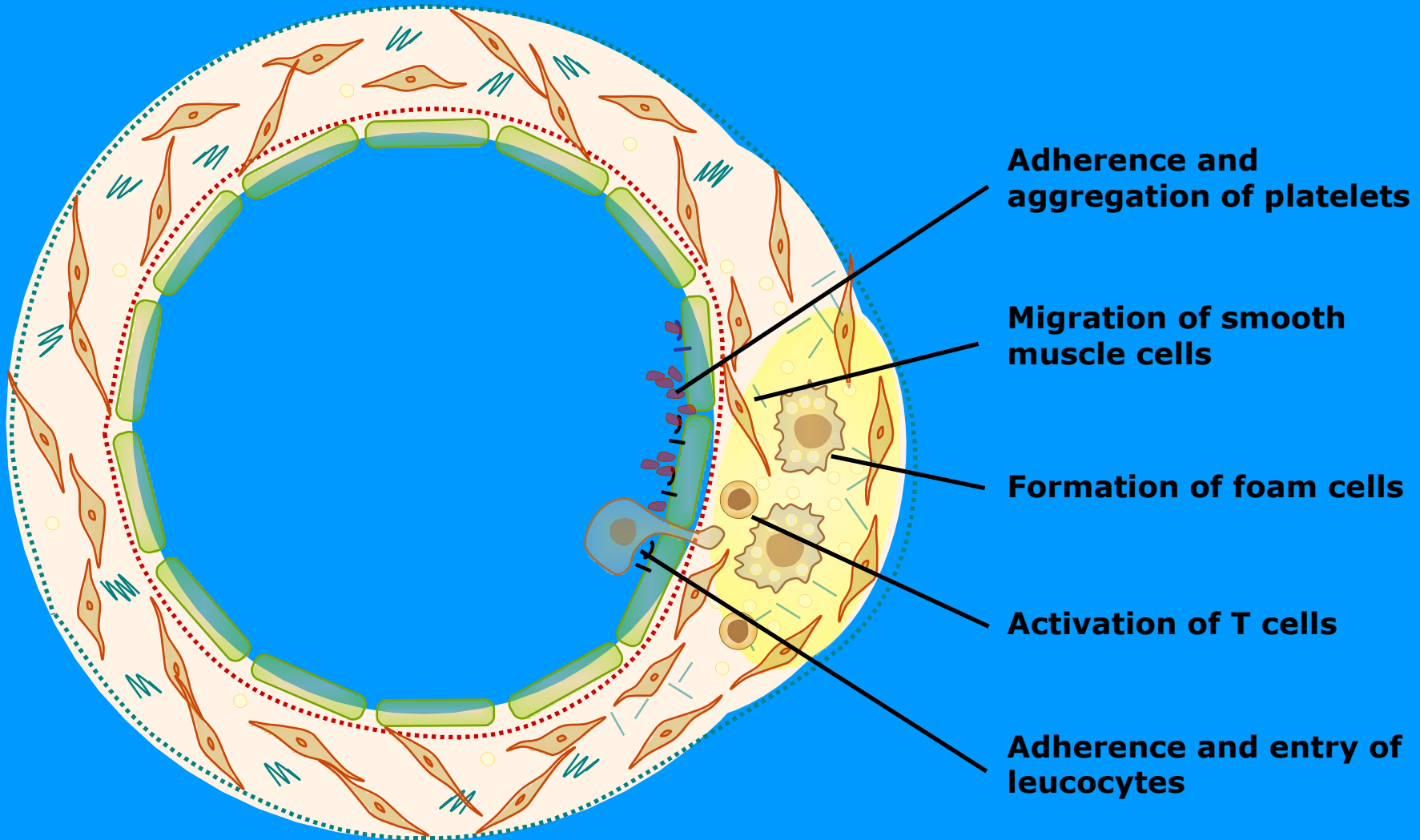
NORMÁLNÍ CÉVNÍ STĚNA



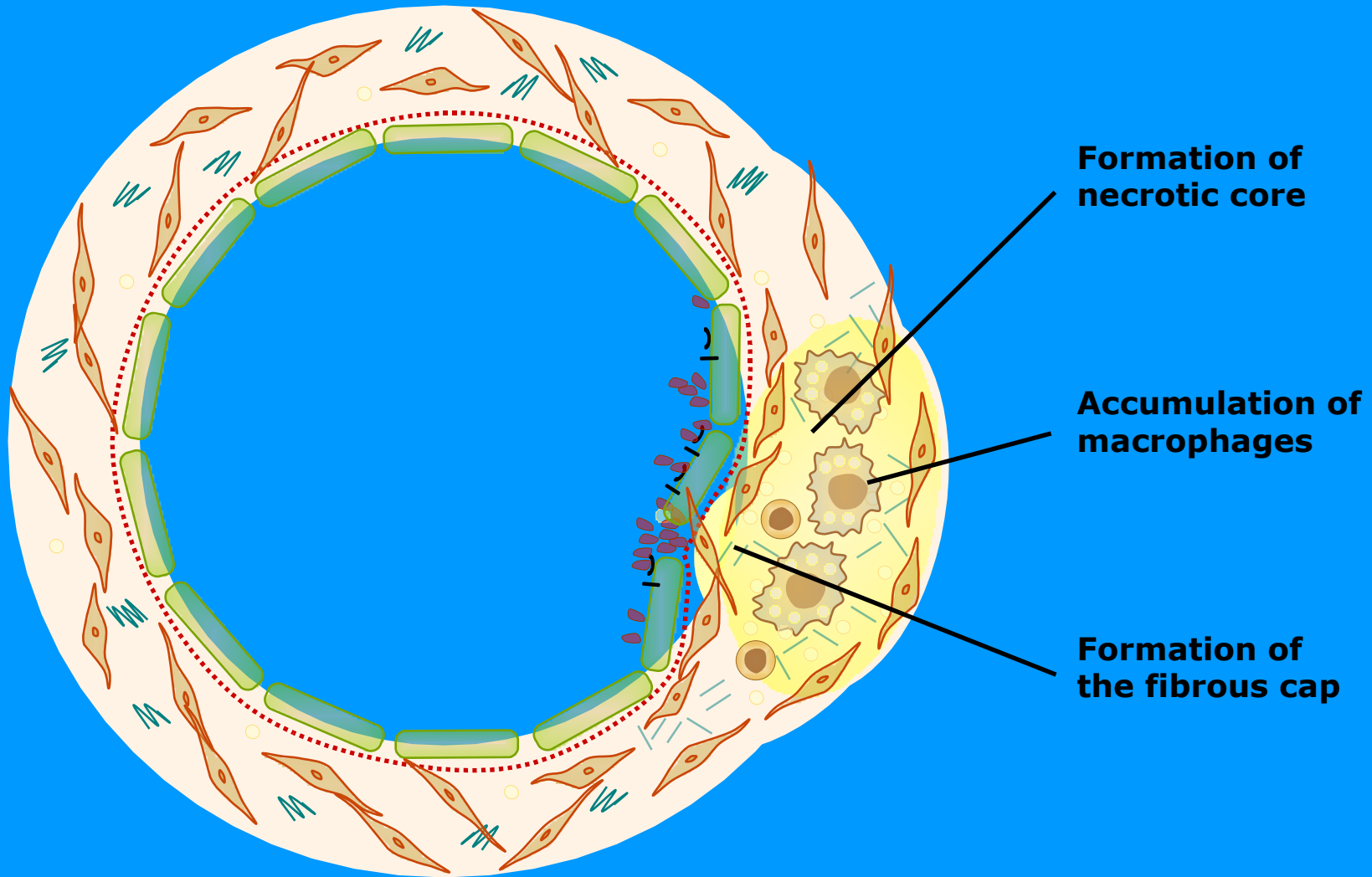
Endotelialní dysfunkce u AS



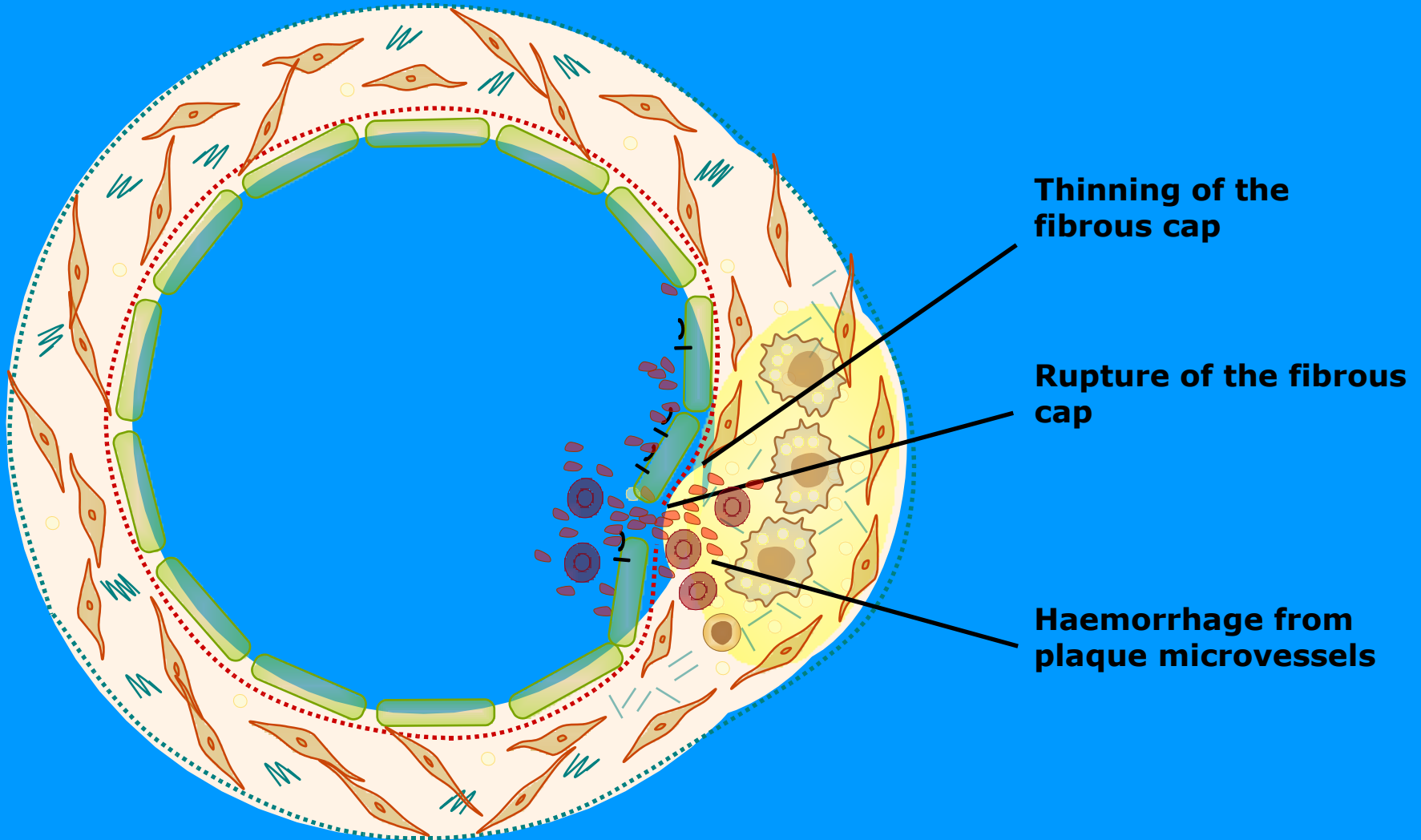
Formace tukových proužků u AS



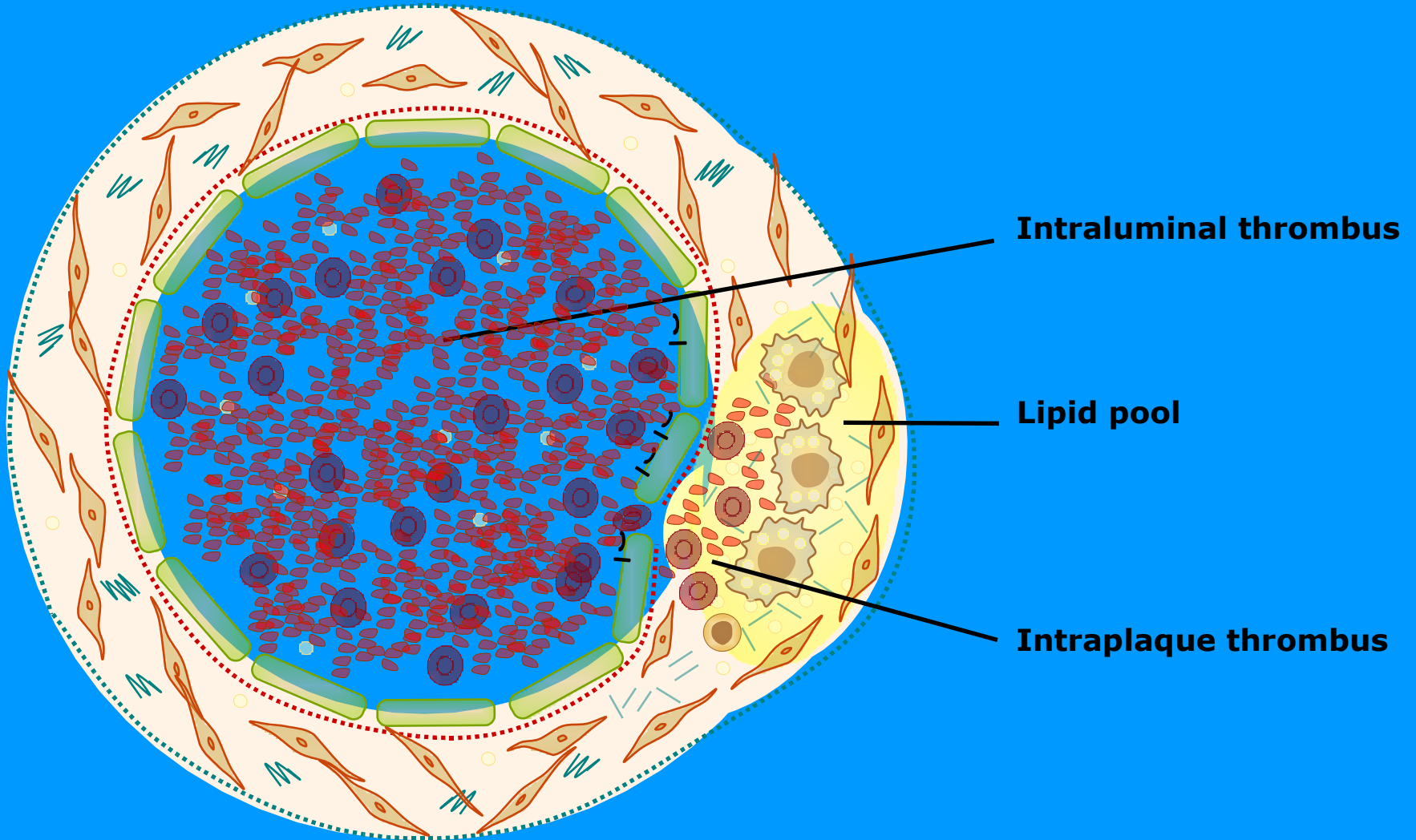
Formace AS plátu



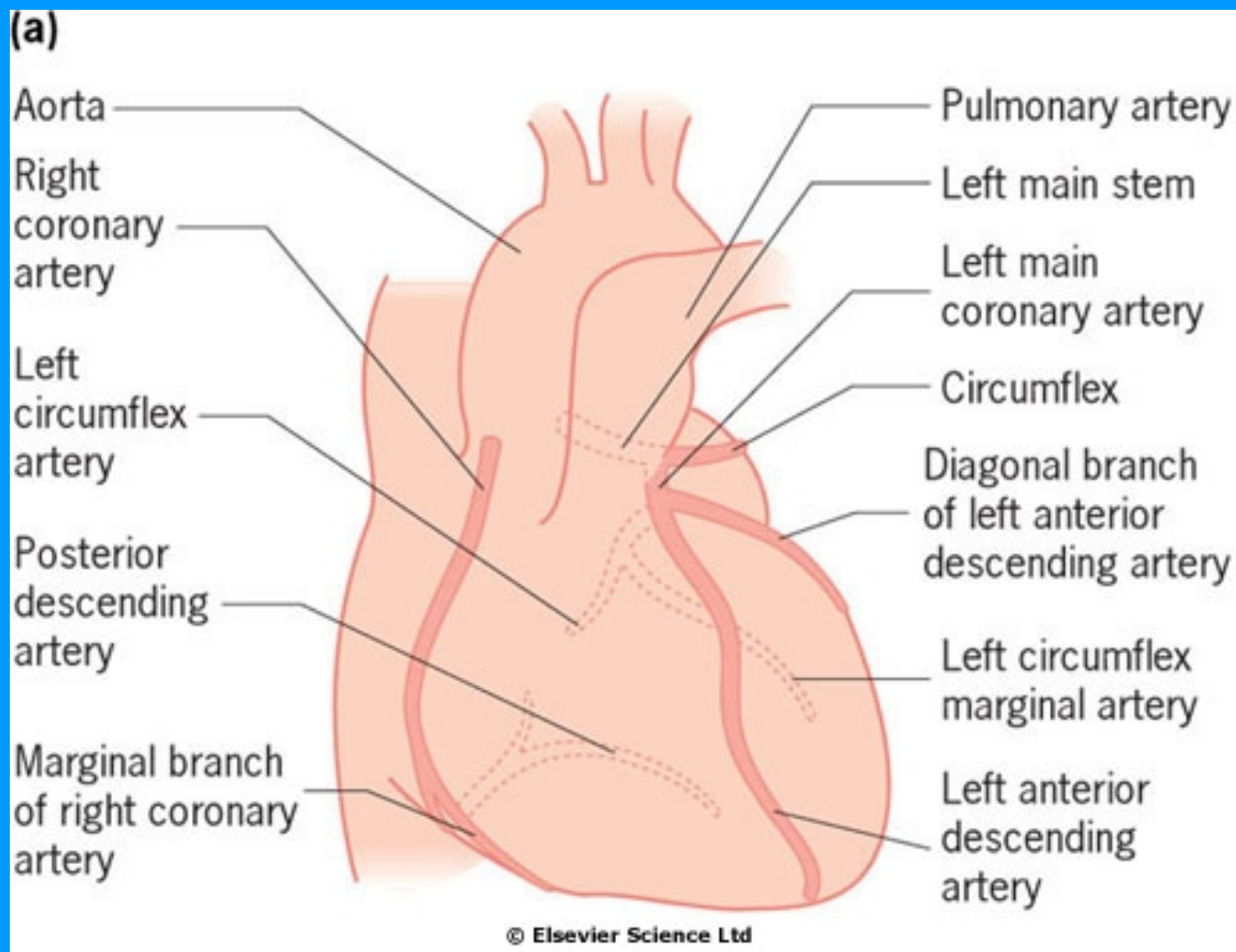
Nestabilní AS plát



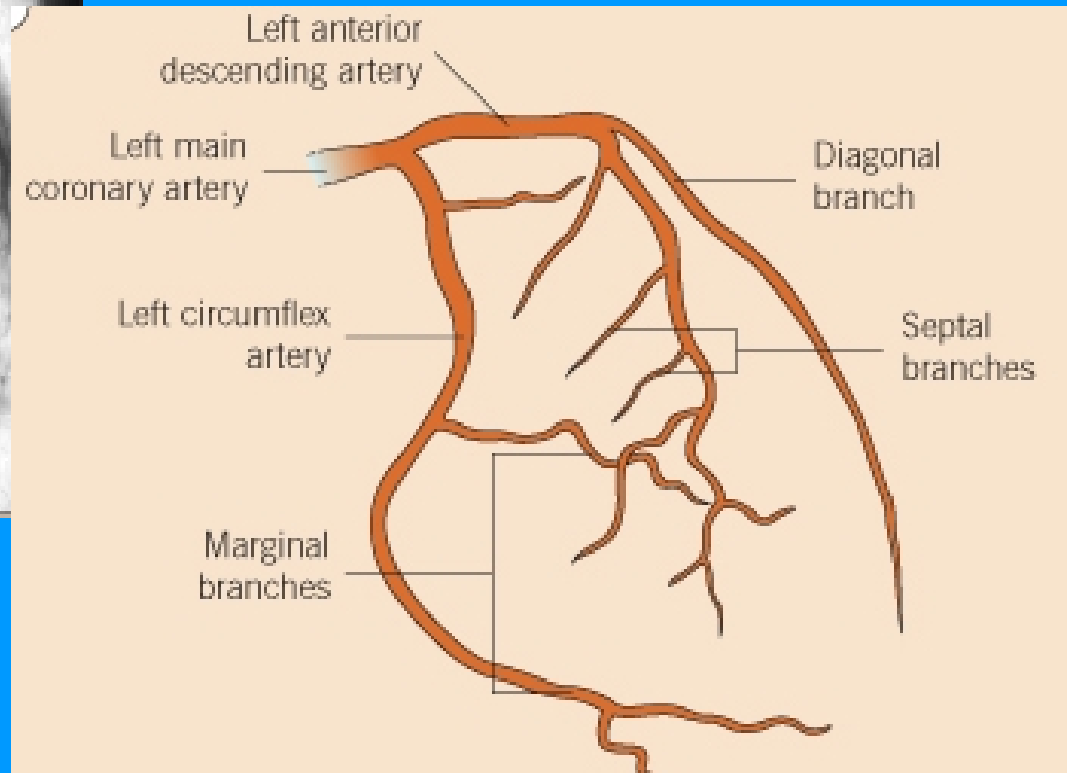
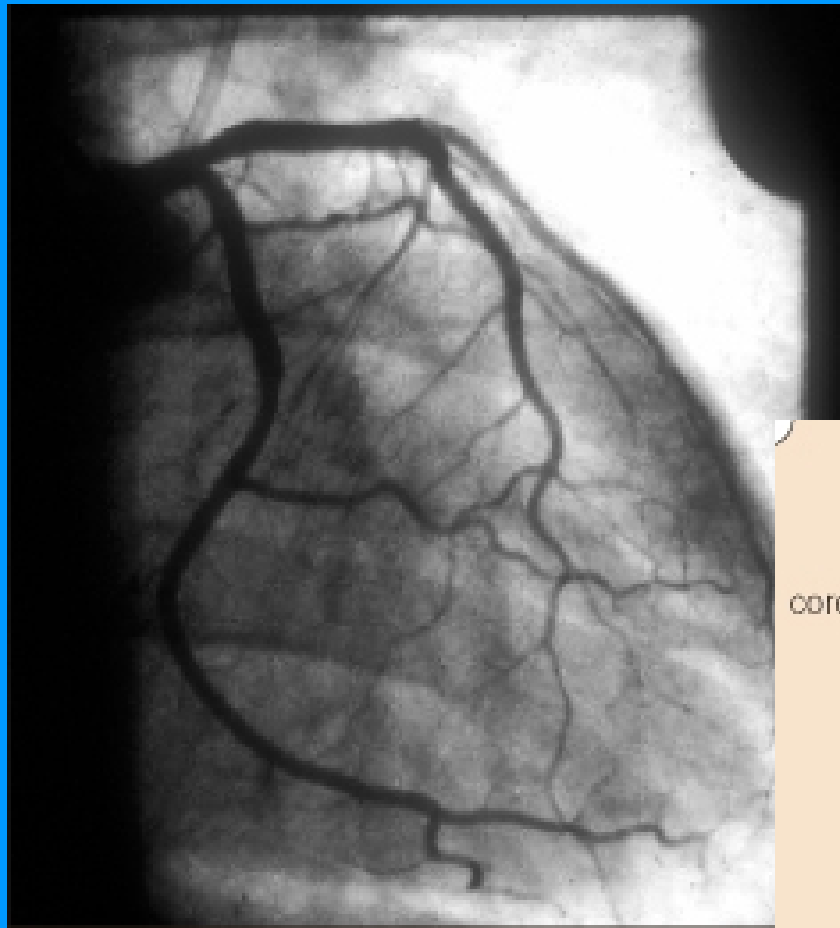
Ruptura AS plátu a formace trombu



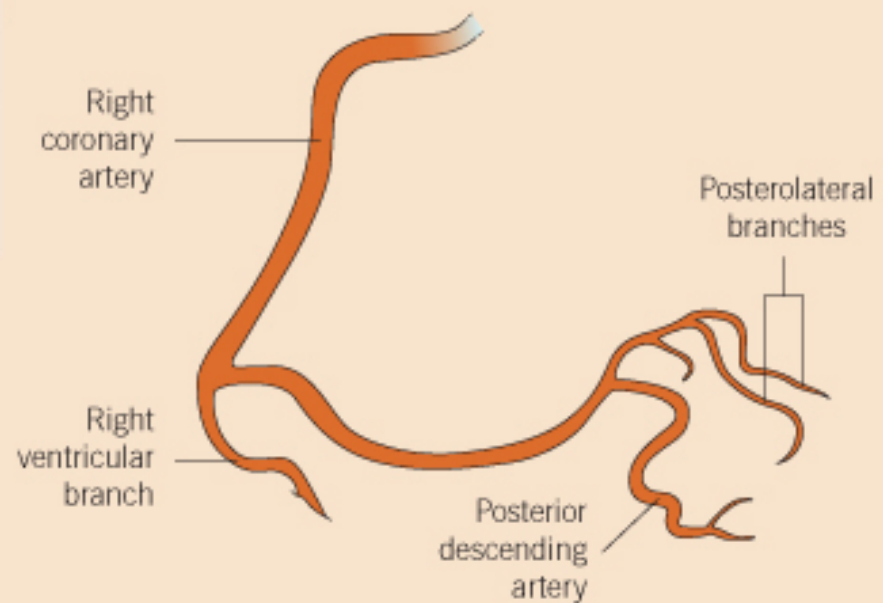
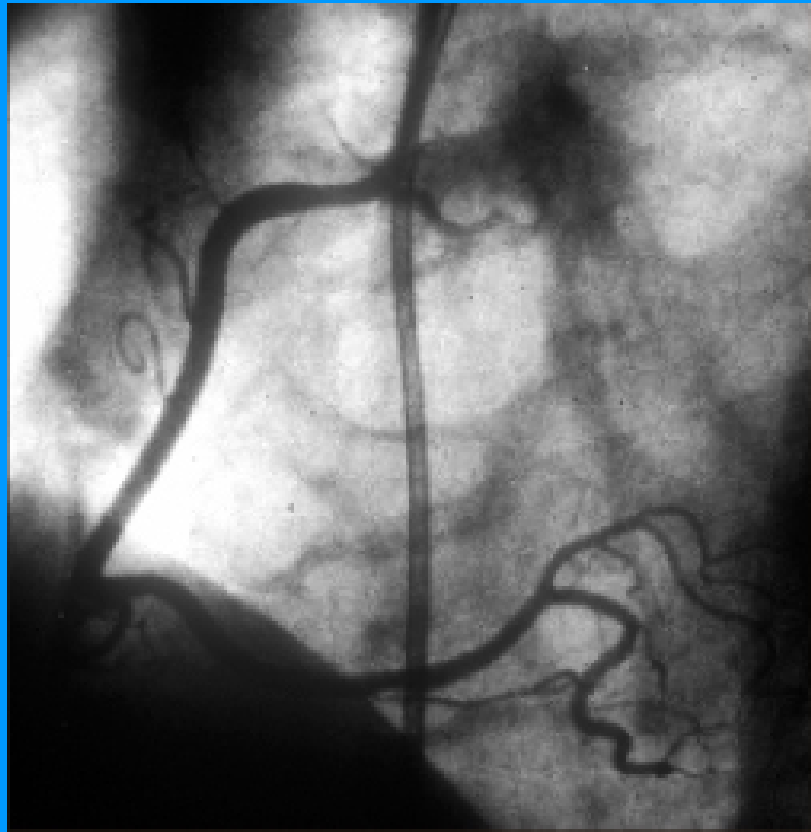
Koronární tepny – arterie coronarie



Levá koronární tepna- ACS

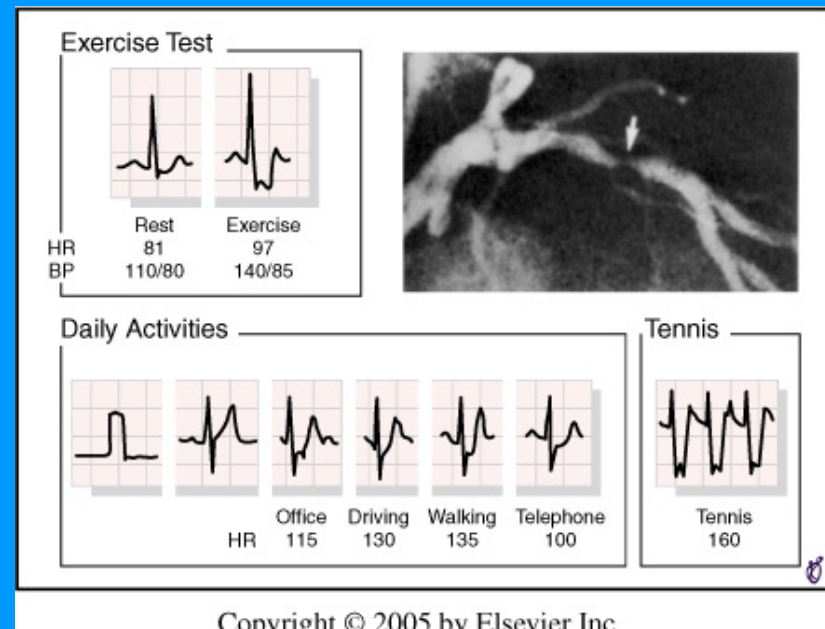
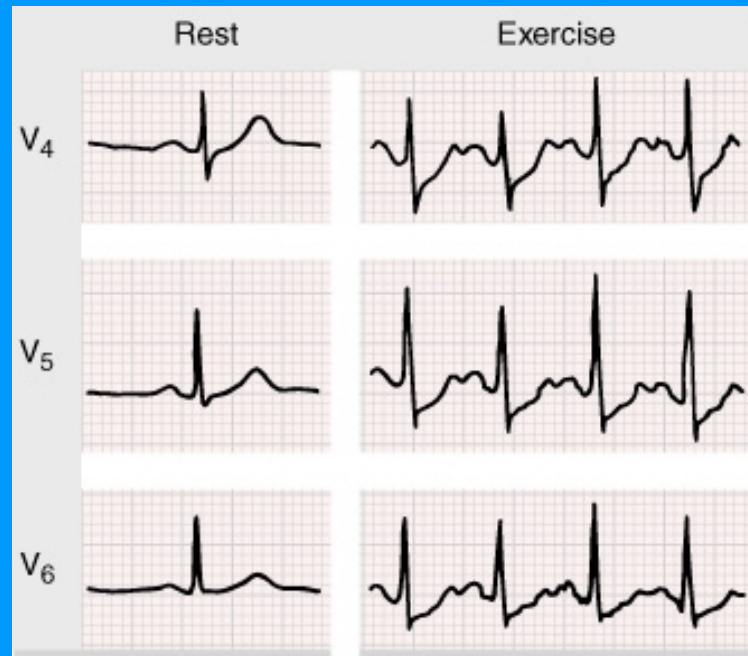


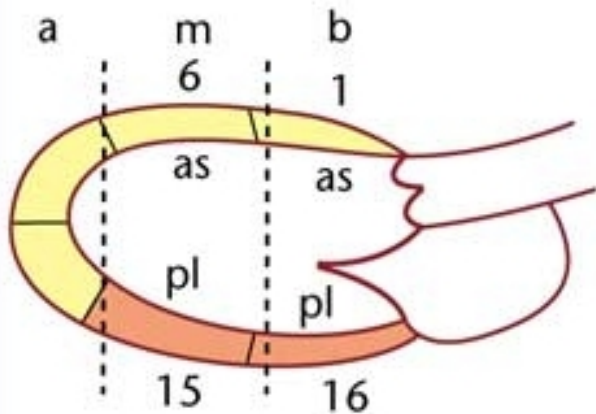
Pravá koronární tepna- ACD



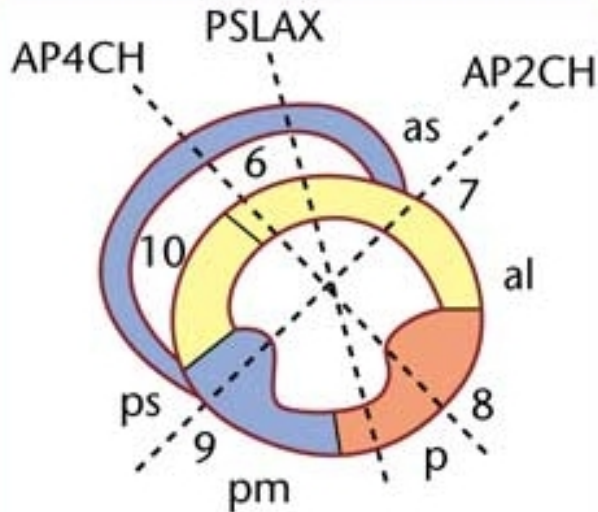
NONINVASIVE TECHNIQUES FOR DETECTING CORONARY ARTERY DISEASE

- Electron-beam CT or multislice CT scanning
- Exercise ECG stress testing
- Exercise myocardial SPECT perfusion imaging
- Pharmacologic stress myocardial SPECT perfusion imaging
- Exercise echocardiography
- Pharmacologic stress echocardiography
- Cardiac magnetic resonance imaging



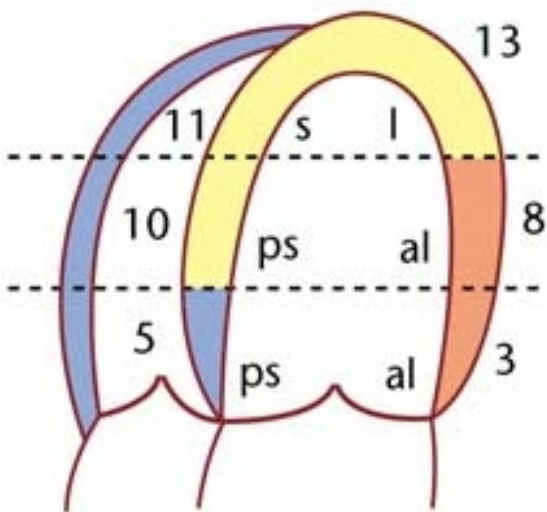


PSLAX

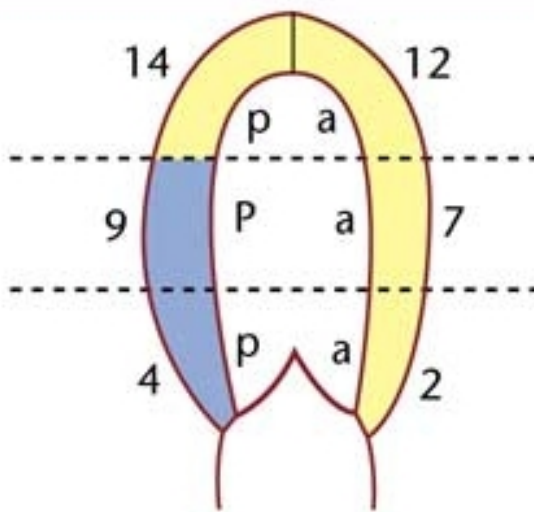


PSSAX

Coronary artery territories

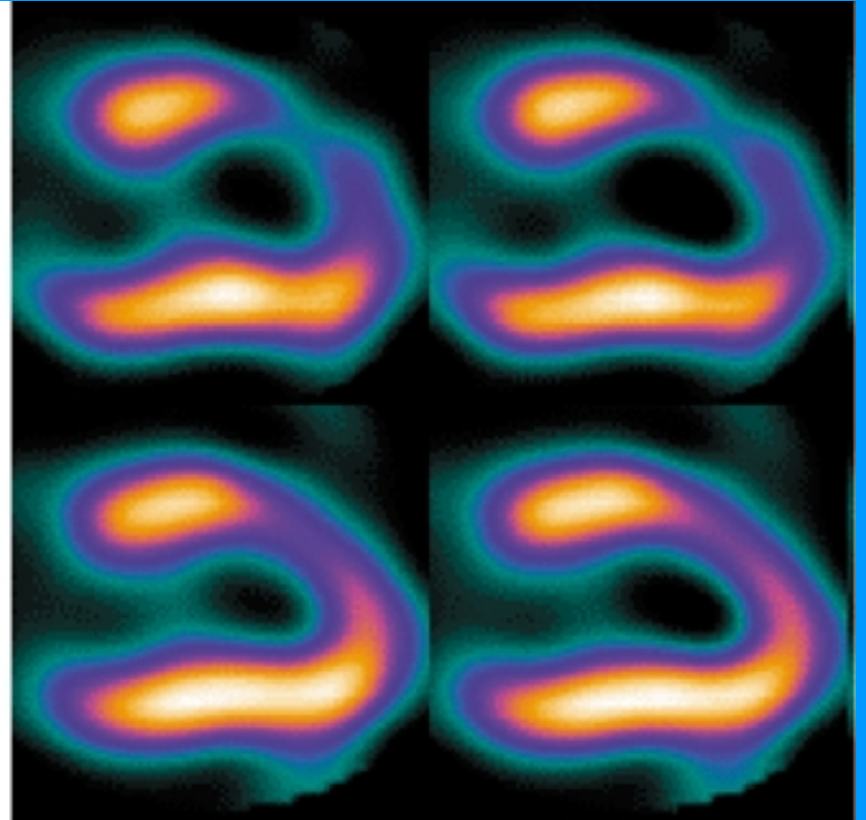
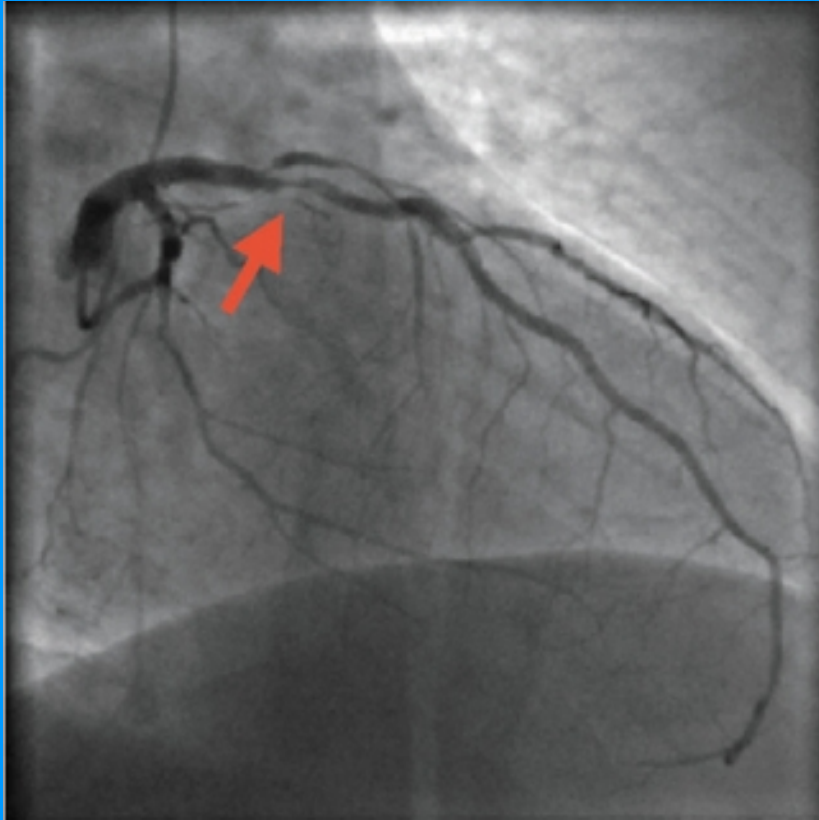


AP4CH(A1)

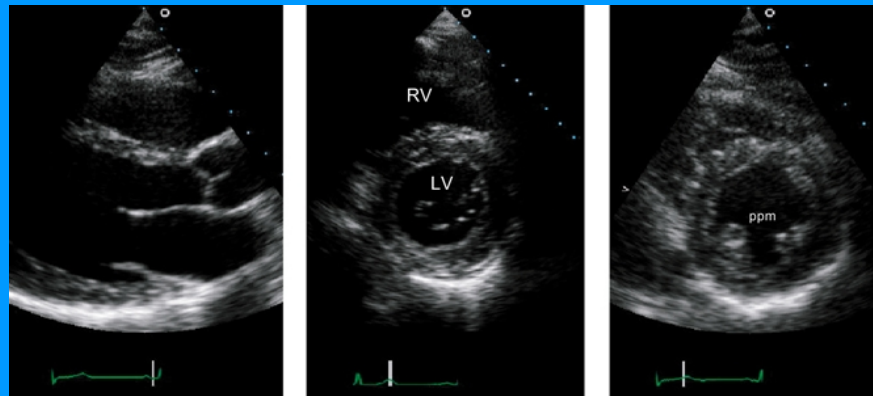
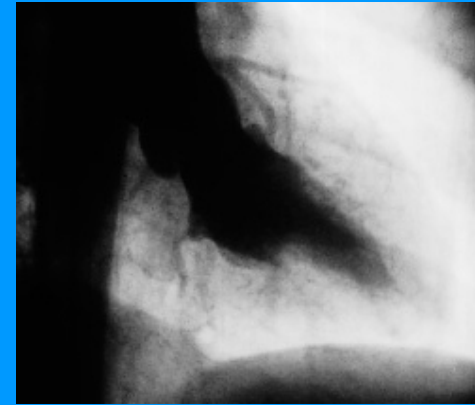
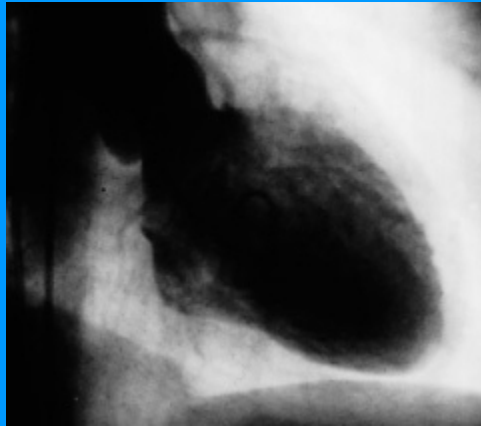


AP2CH(A2)

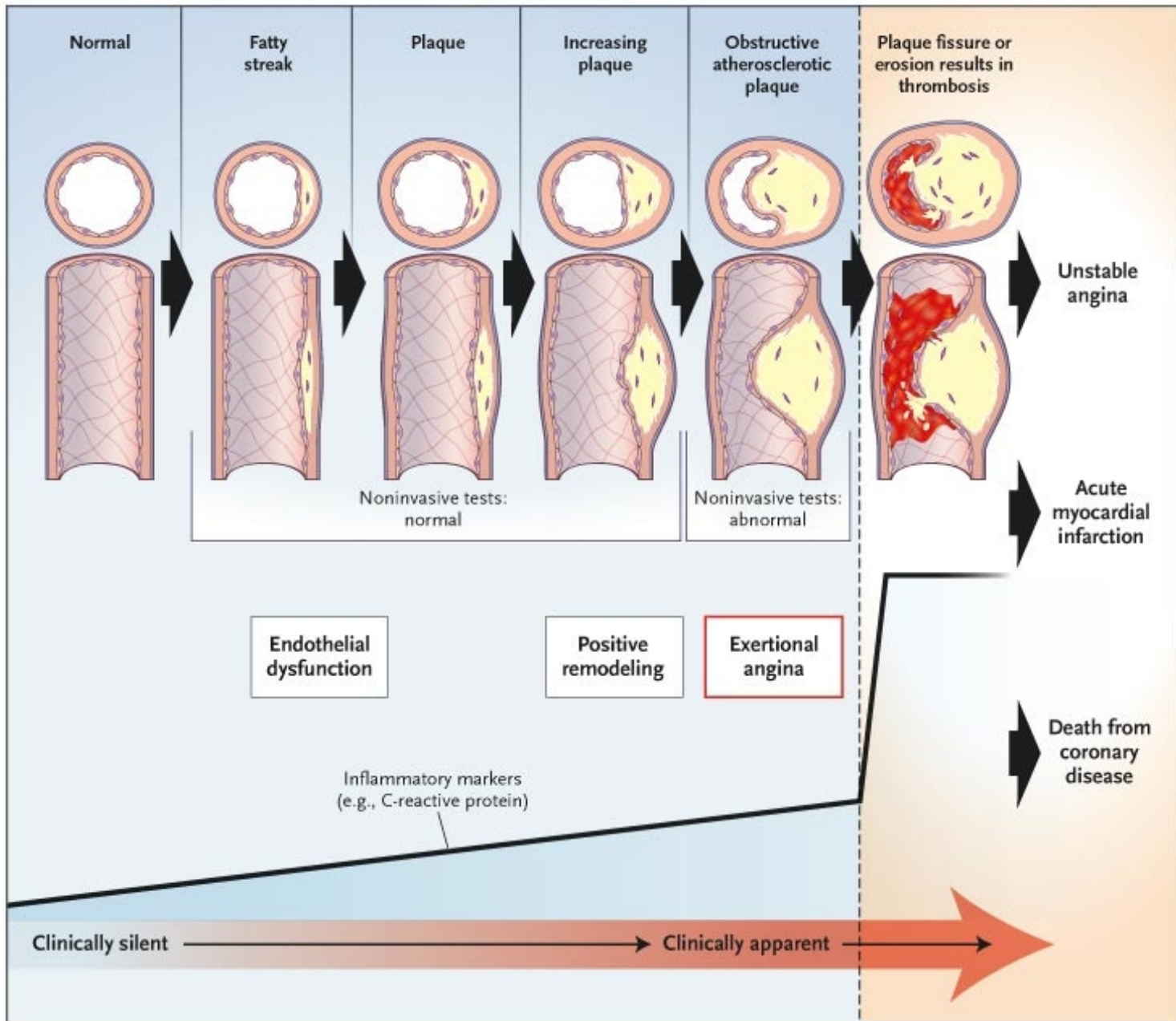
Wall motion score
 1= Normal
 2= Mild hypokinesia
 3= Severe hypokinesia
 4= Akinesia
 5= Dyskinesia



Ejekční frakce



Ejekční frakce(EF) = (LVEDV-LVESV) * LVEDV⁻¹
norma je 0,55 - 0,65 (55-65%) ; selhání < 0,4





Retrosternal
 Myocardial ischemic pain
 Pericardial pain
 Esophageal pain
 Aortic dissection
 Mediastinal lesions
 Pulmonary embolization

Shoulder
 Myocardial ischemic pain
 Pericarditis
 Subdiaphragmatic abscess
 Diaphragmatic pleurisy
 Cervical spine disease
 Acute musculoskeletal pain
 Thoracic outlet syndrome

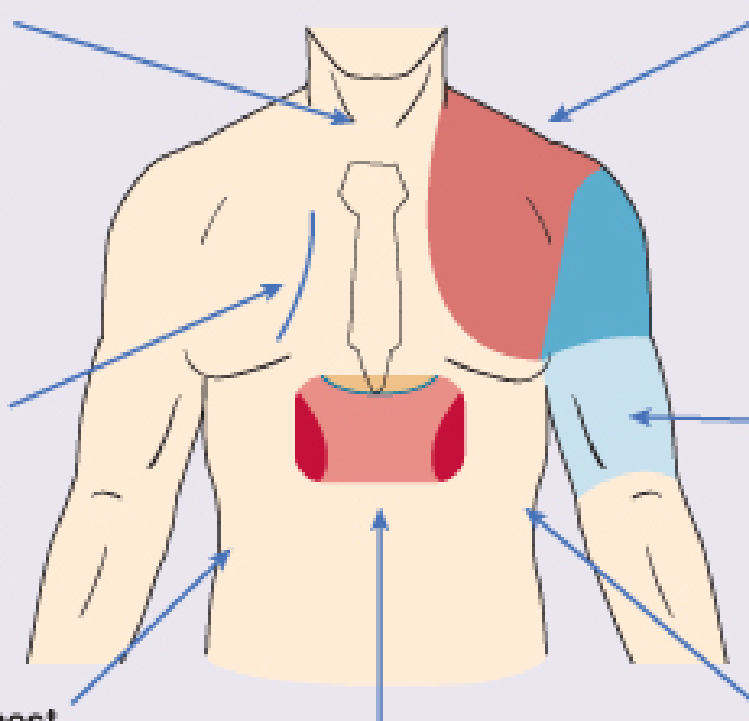
Interscapular
 Myocardial ischemic pain
 Musculoskeletal pain
 Gallbladder pain
 Pancreatic pain

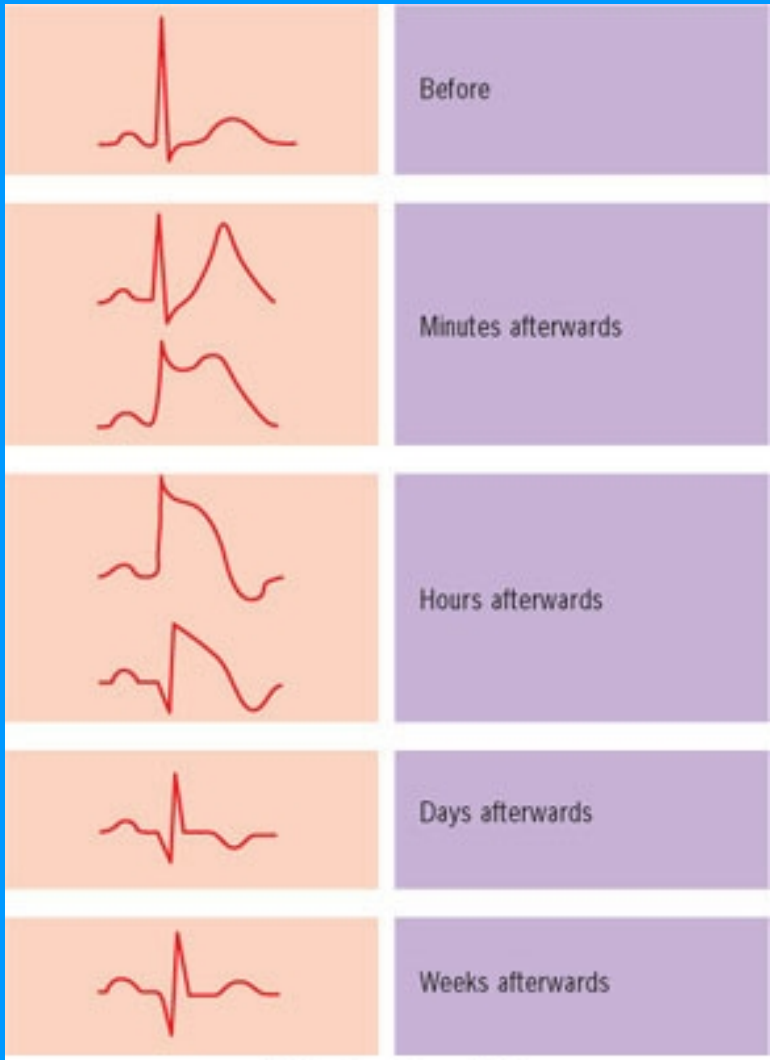
Arms
 Myocardial ischemic pain
 Cervical/dorsal spine pain
 Thoracic outlet syndrome

Right Lower Anterior Chest
 Gallbladder pain
 Distention of the liver
 Subdiaphragmatic abscess
 Pneumonia/pleurisy
 Gastric or duodenal penetrating ulcer
 Pulmonary embolization
 Acute myositis
 Injuries

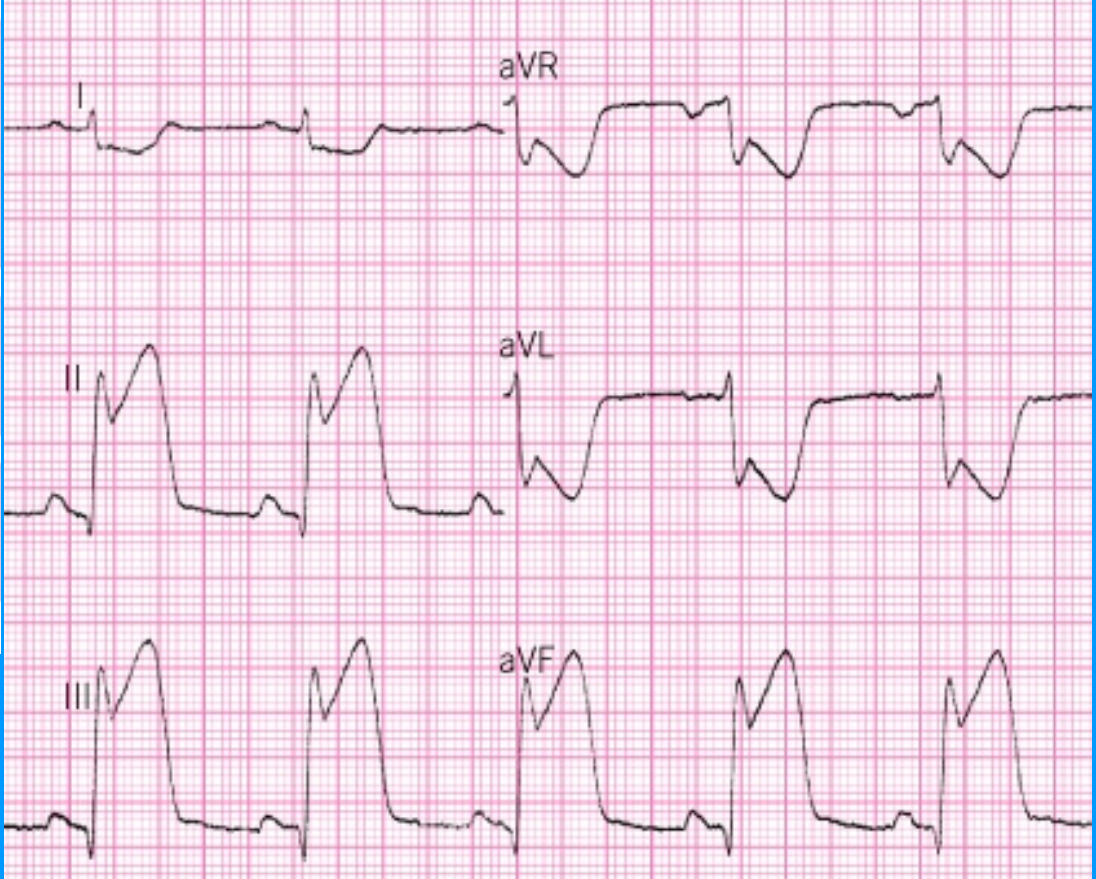
Epigastric
 Myocardial ischemic pain
 Pericardial pain
 Esophageal pain
 Duodenal/gastric pain
 Pancreatic pain
 Gallbladder pain
 Distention of the liver
 Diaphragmatic pleurisy
 Pneumonia

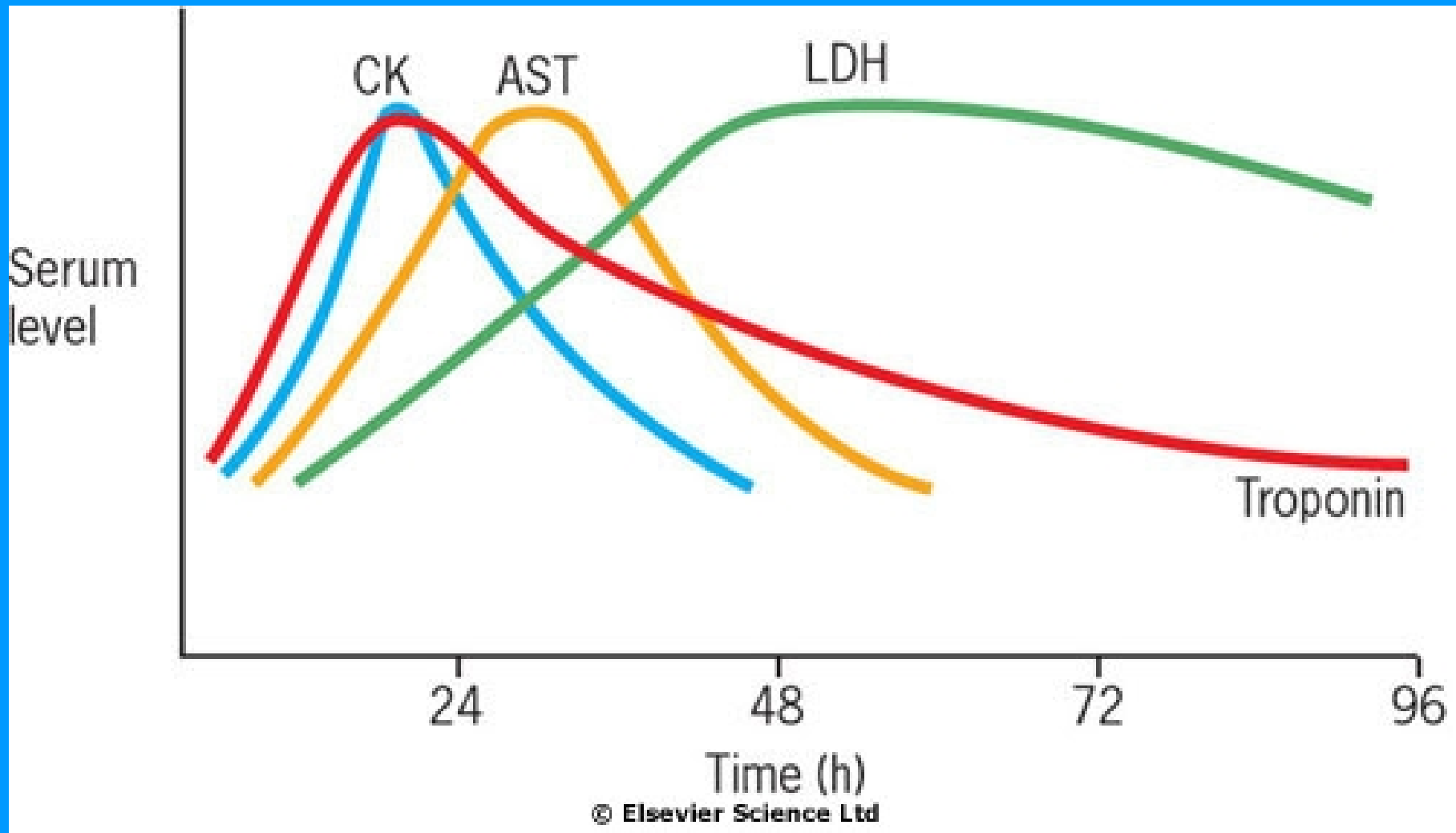
Left Lower Anterior Chest
 Intercostal neuralgia
 Pulmonary embolization
 Myositis
 Pneumonia/pleurisy
 Splenic infarction
 Splenic flexure syndrome
 Subdiaphragmatic abscess
 Precordial catch syndrome
 Injuries





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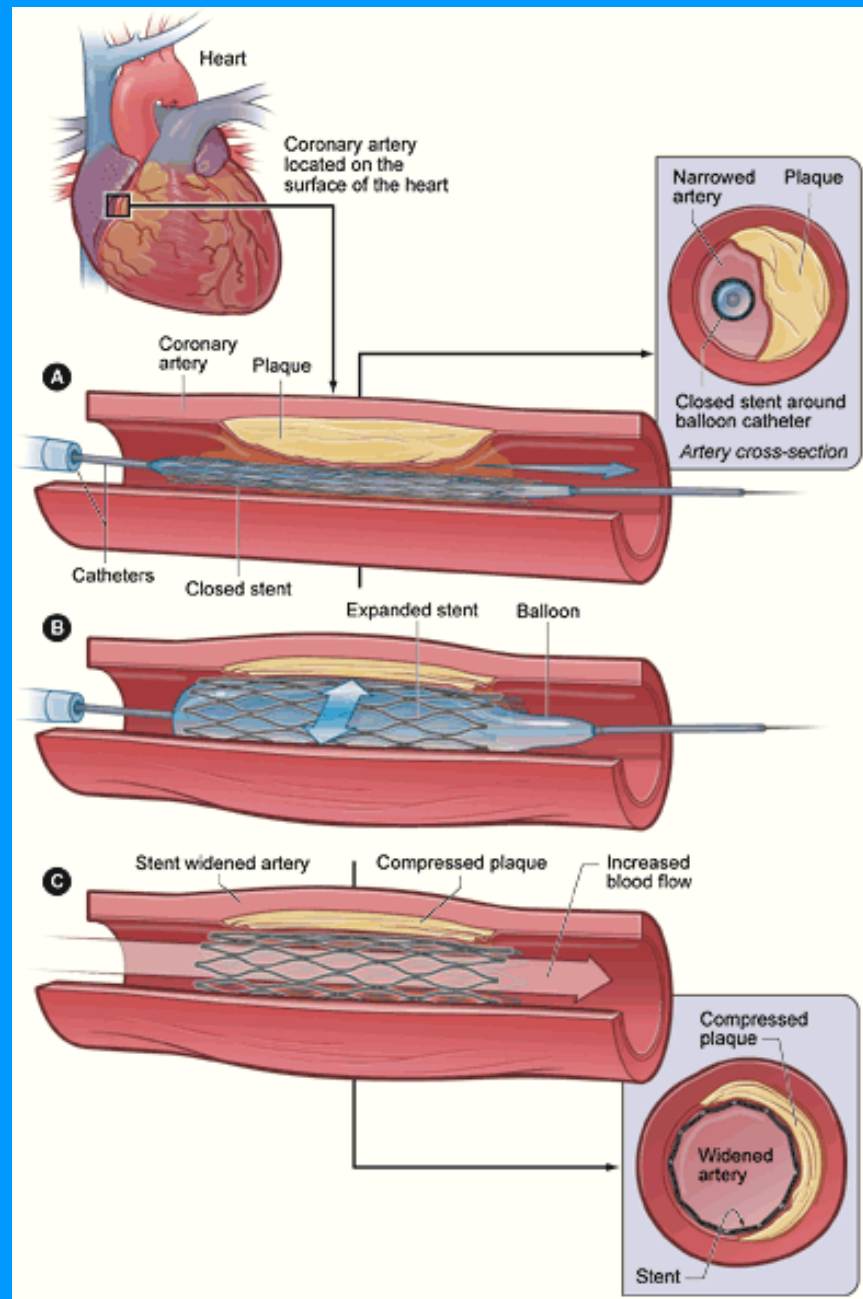
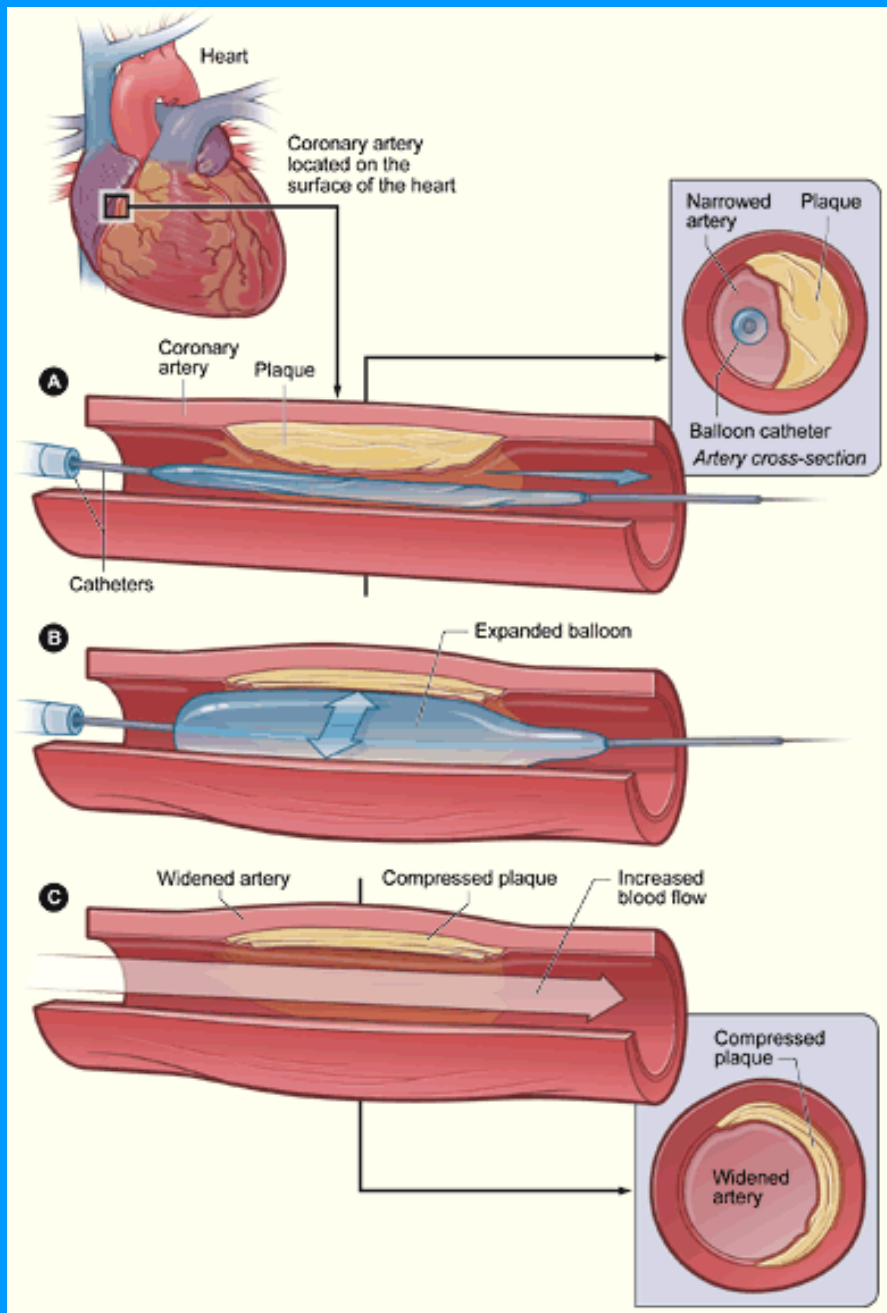


VESELA ALENA, F., 1944.02.10
1538/99

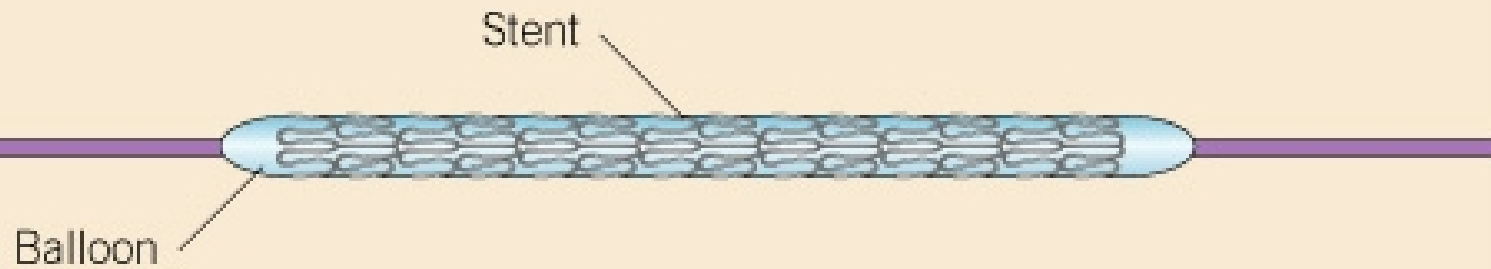
I. INTERNI KLINIKA-FN U SV. ANNY
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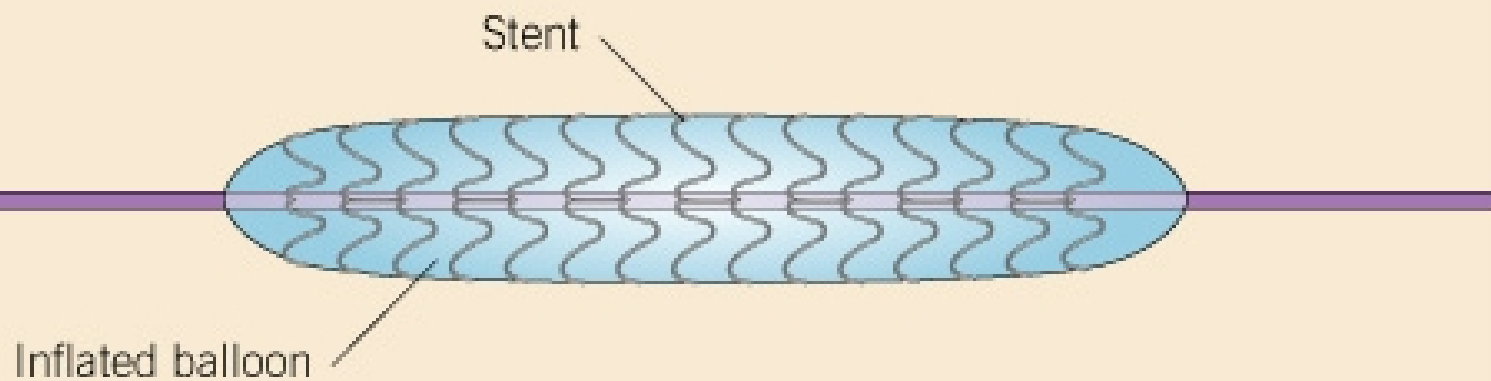
1999.11.11
Acq: 1, Image: 1



Deflated balloon with premounted stent



Delivery of stent with inflation of balloon



VESELA ALENA, F., 1944.02.10
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I. INTERNI KLINIKA-FN U SV. ANNY
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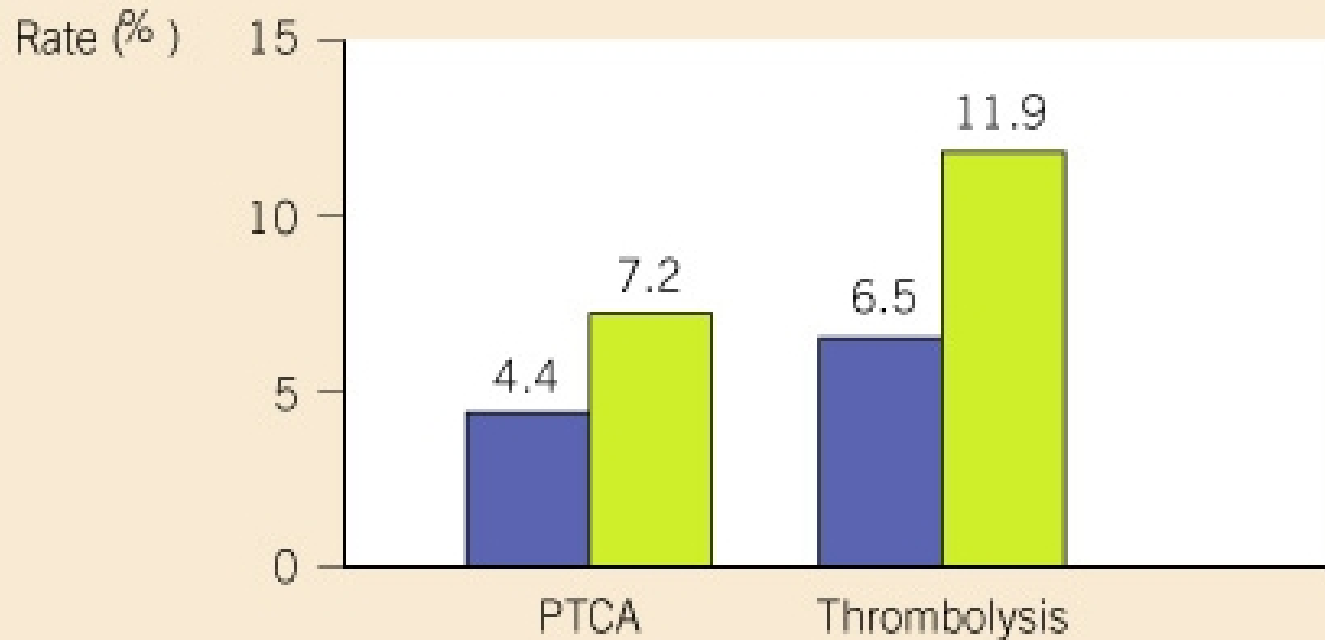


VESELA ALENA, F., 1944.02.10
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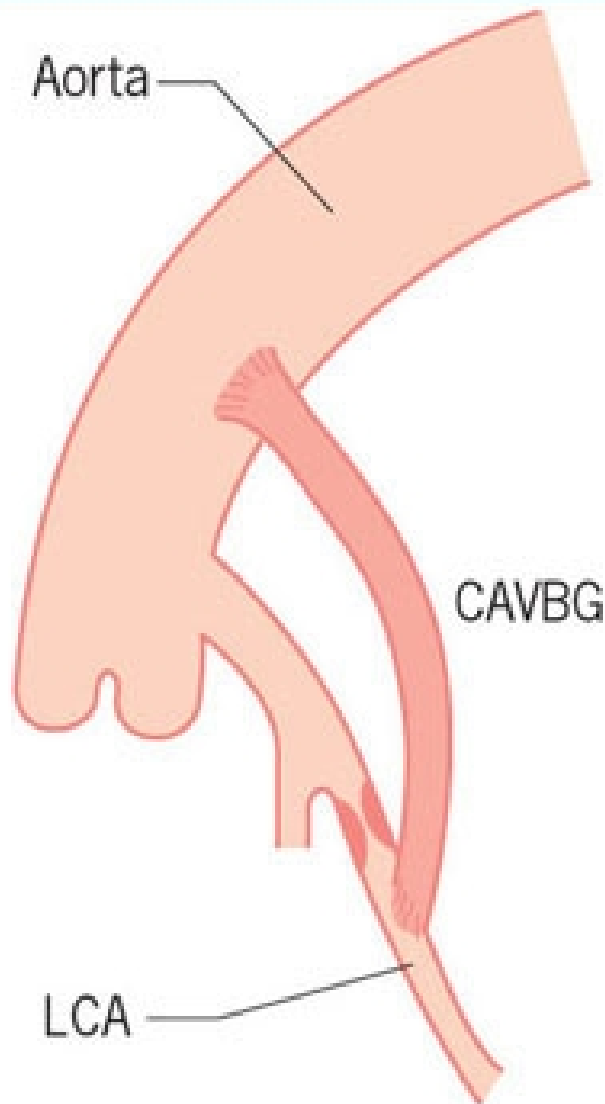
MORTALITY AND COMBINED MORTALITY AND RE-MYOCARDIAL INFARCTION RATES FOR PTCA AND FOR THROMBOLYSIS



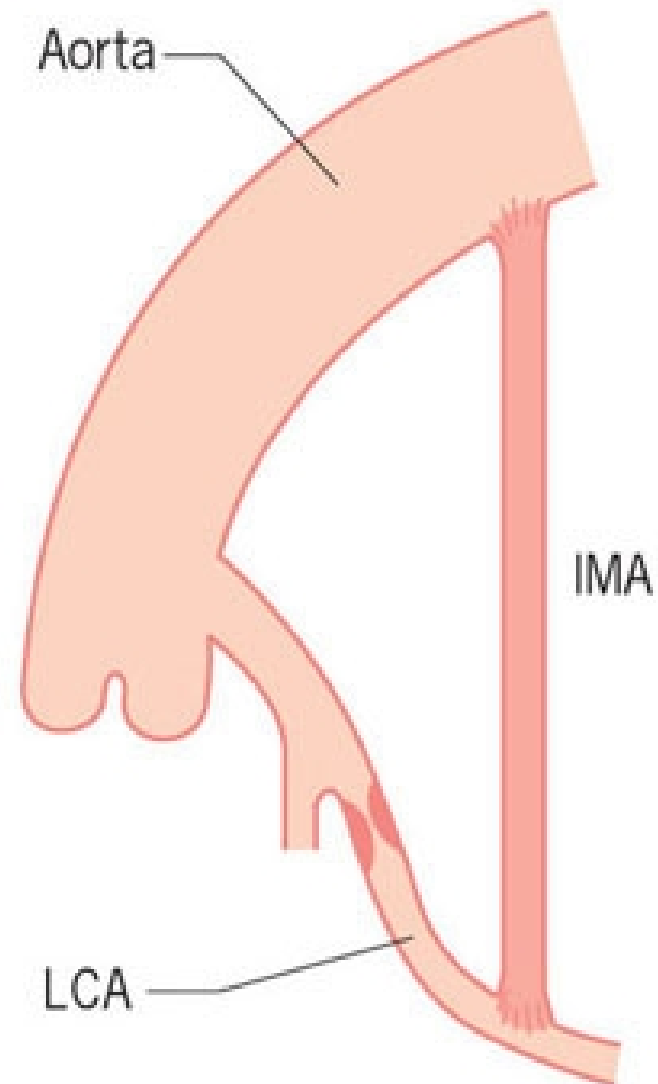
 Mortality rate (34% reduction; OR 0.66, 95% CI 0.46 to 0.94)

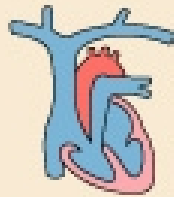
 Combined mortality and re-myocardial infarction rate (OR 0.58, 95% CI 0.44 to 0.76)

Coronary artery vein graft

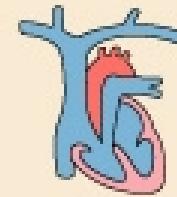


Internal mammary arterial implantation





For your heart



This simple checklist will extend your life
Talk to your doctor about it!

Stop smoking!

If you have heart problems, continuing to smoke will be lethal. Talk to your doctor about the different ways to help you stop.

Control your diabetes

Take your medication, watch your diet. Your blood sugar goal is to be as close to 100 as possible.

Know your blood pressure

Your blood pressure goal is $<140/90$.

Control your weight

Be at your ideal weight. Ask your doctor what it should be.

Exercise

30–60 minutes of walking 5 times/week.

Keep your 'bad cholesterol' low

Your 'bad cholesterol' (also called LDL) should be less than 100. Make sure it gets there and stays there.

Be aware of how you feel

Report any changes in symptoms or how you feel in general to your doctor.