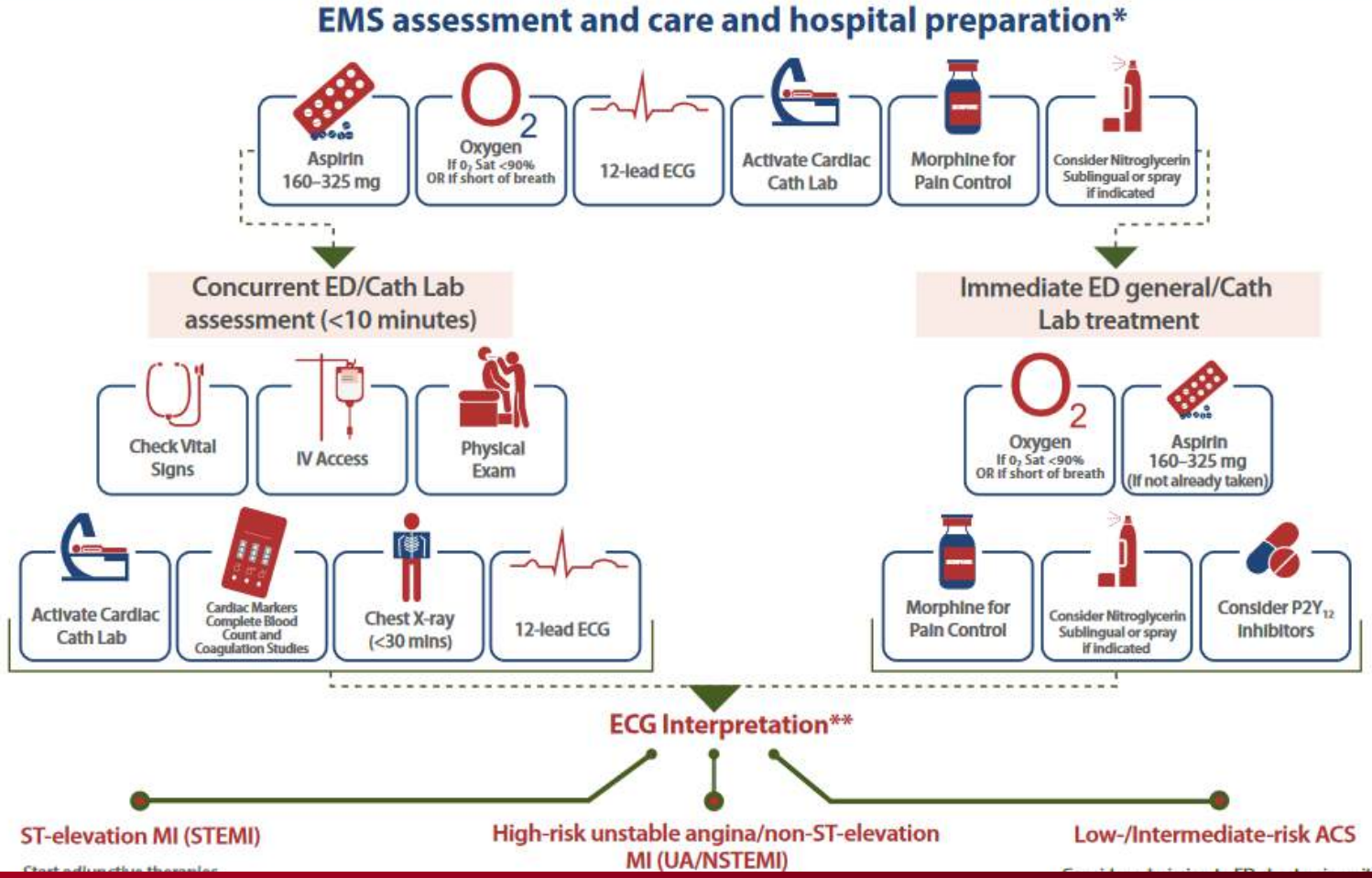
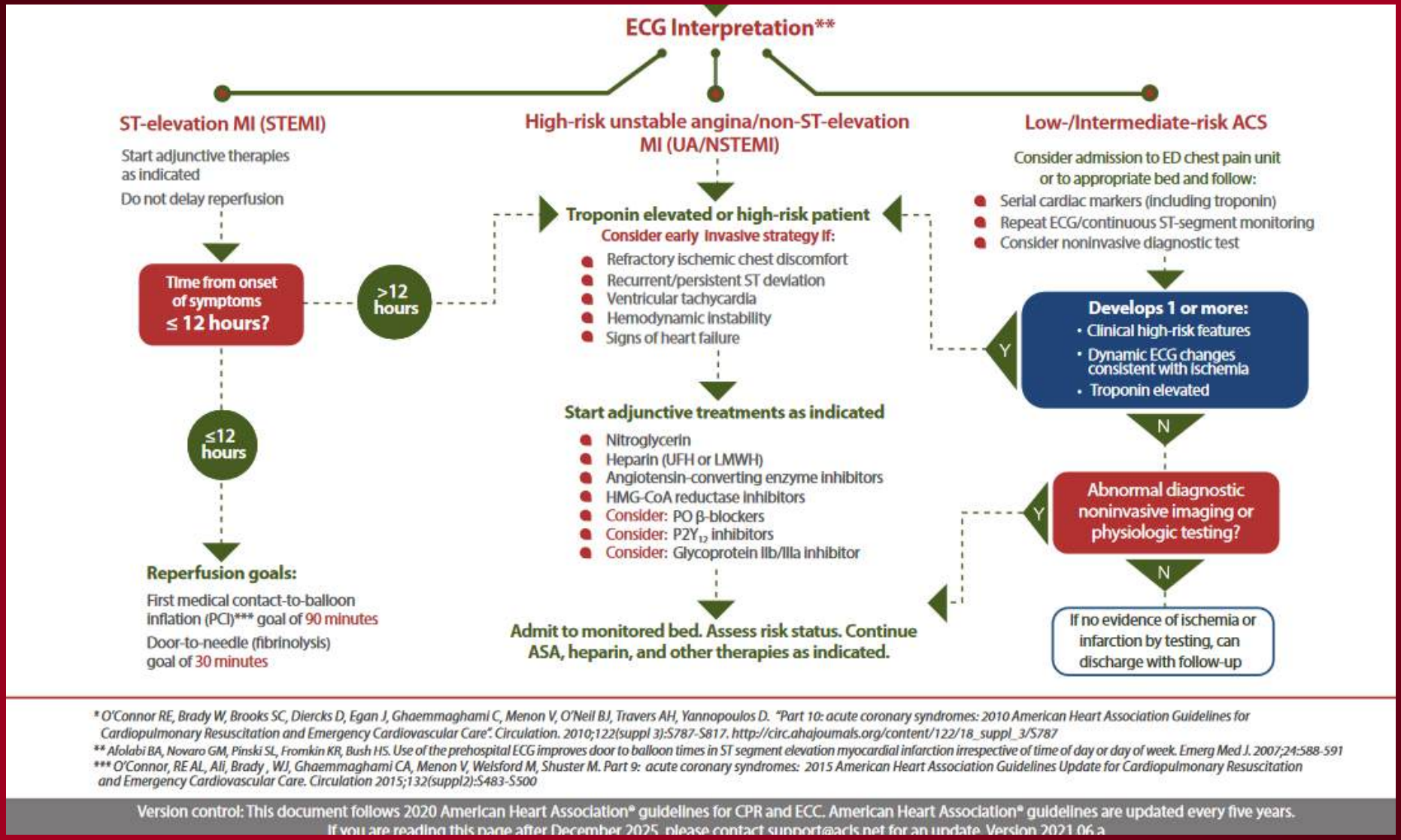
Acute Coronary Syndromes Algorithm

ACLS Training Center®
ACLS Online Since 1998

Syndromes Suggestive of Ischemia or Infarction





* O'Connor RE, Brady W, Brooks SC, Diercks D, Egan J, Ghaemmaghami C, Menon V, O'Neil BJ, Travers AH, Yannopoulos D. "Part 10: acute coronary syndromes: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care". Circulation. 2010;122(suppl 3):S787-S817. http://circ.ahajournals.org/content/122/18_suppl_3/S787

** Afolabi BA, Novaro GM, Pinski SL, Fromkin KR, Bush HS. Use of the prehospital ECG improves door to balloon times in ST segment elevation myocardial infarction irrespective of time of day or day of week. Emerg Med J. 2007;24:588-591

*** O'Connor, RE AL, Ali, Brady , WJ, Ghaemmaghami CA, Menon V, Welsford M, Shuster M. Part 9: acute coronary syndromes: 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation 2015;132(suppl2):S483-S500

LOW RISK ACS

No high risk or intermediate features :

- **Normal or unchanged EFG during episode of chest pain**

Suggested treatment:
ASA; heparin (optional); observation. Early stress testing.

Antman et al., JAMA 2000; 284-835

INTERMEDIATE RISK ACS

No high risk features :

- **Previous history of coronary intervention**
- **Increased baseline risk diabetes, elderly (> 70 years old)**
- **Minimally elavated troponin (> 0.01 and 0.1)**
- **T wave inversion > 1 mm in > 3 leeds excluding V1**

Suggested treatment: ASA; heparin (LMWH prefered); clopidogrel; decision re intervension after stress testing.

Antman et al., JAMA 2000; 284-835

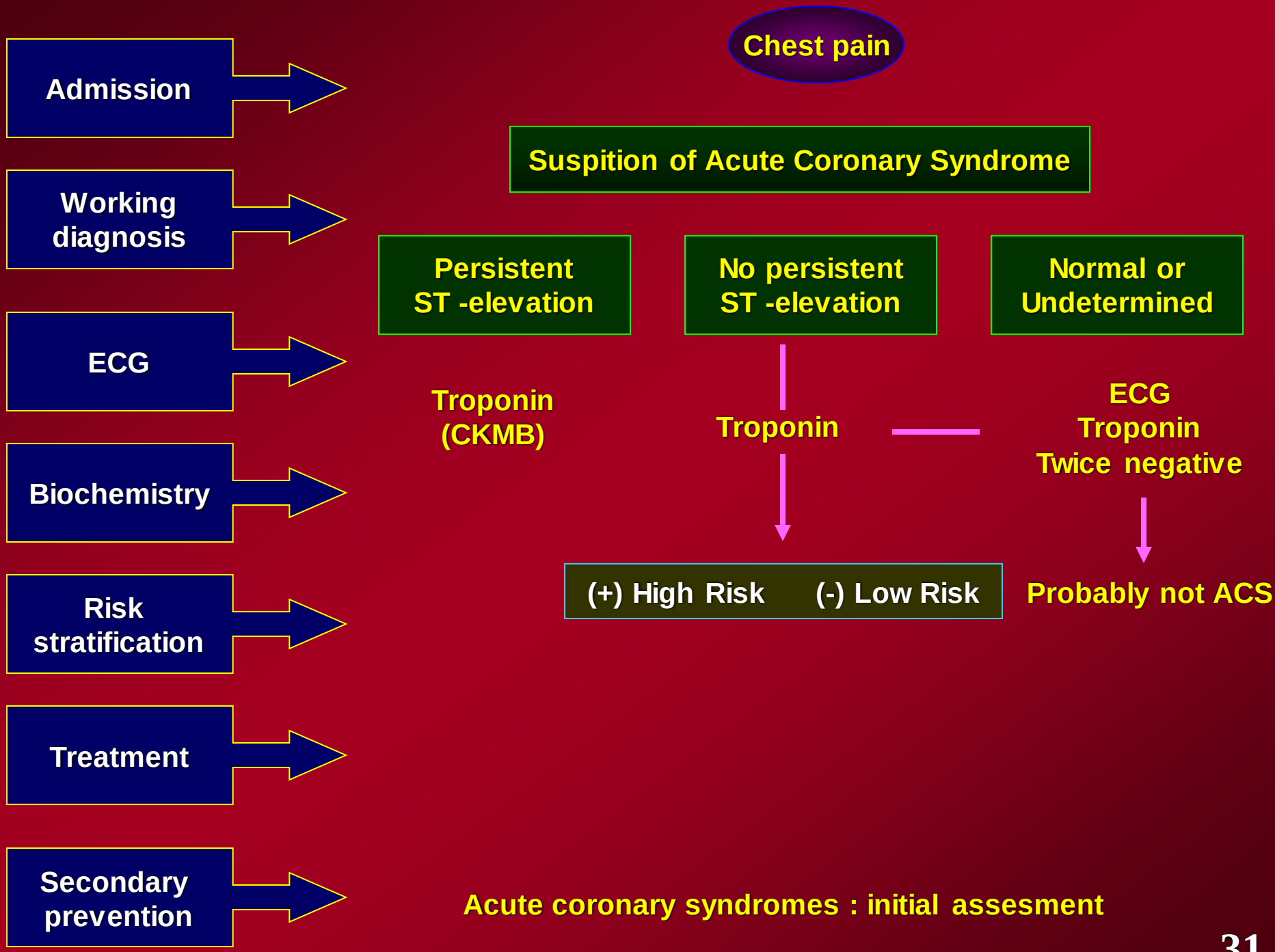
HIGH RISK PATIENTS

Include one or more features :

- Transient SST Elevation or depression > 1 mm sustained or transient ST depression
- Accelerating tempo of symtoms within 48 hours
- Positive biocemical markers (↑ troponin, CPK MB)
- Recurrent / refractory myocardial ischemia despite therapy
- Recenty acute myocardial infarction (within 4 weeks)
- Pain with ECG ST changes
- Hemodynamic compromise with ongoing chest pain (heart failure or hypotension)

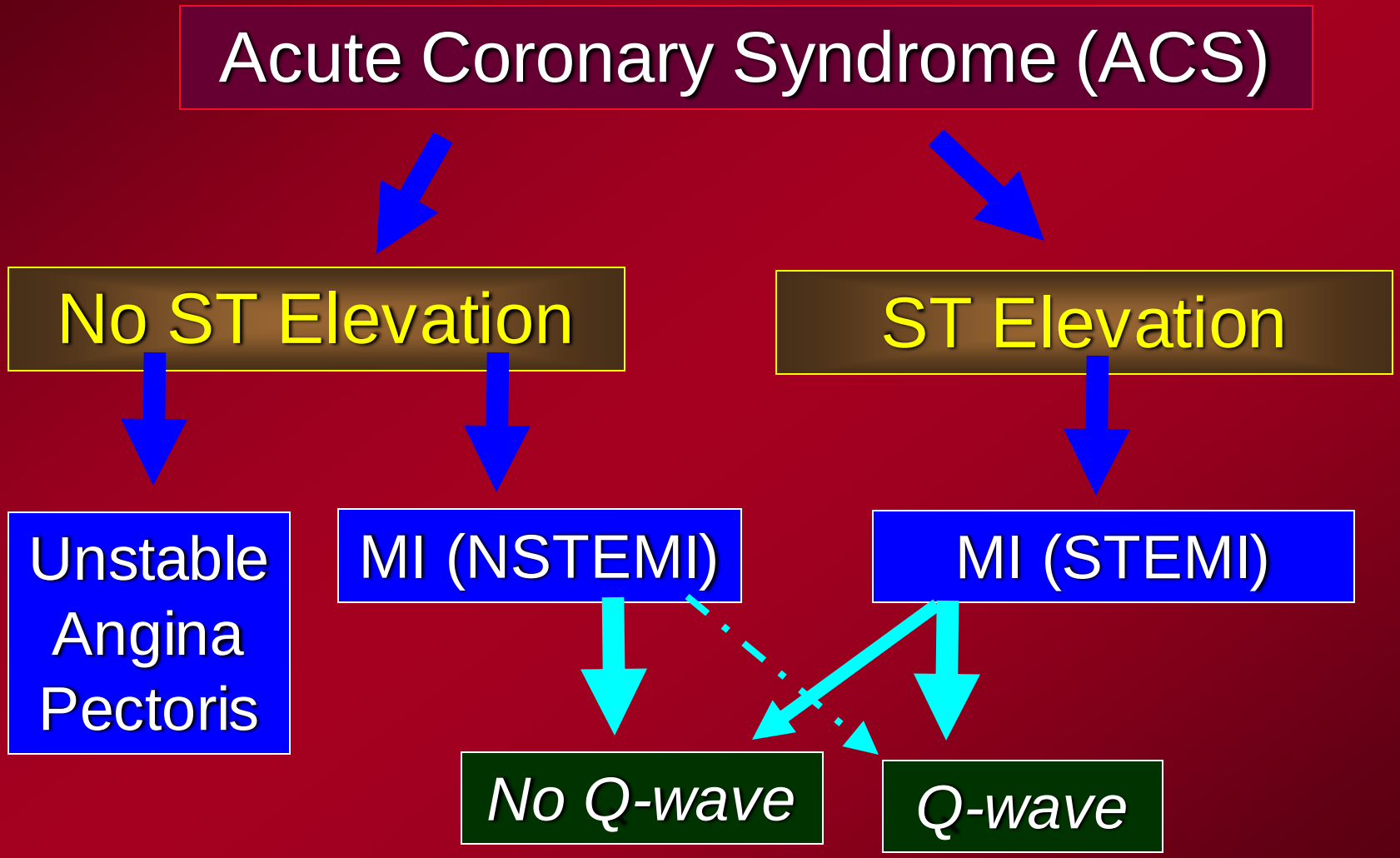
Suggested treatment: ASA; Clopidogrel (unless CABG likely); heparin (LMWH preferred); GP IIB/IIIA receptor antagonist; early coronary intervention

Antman et al., JAMA 2000; 284-835



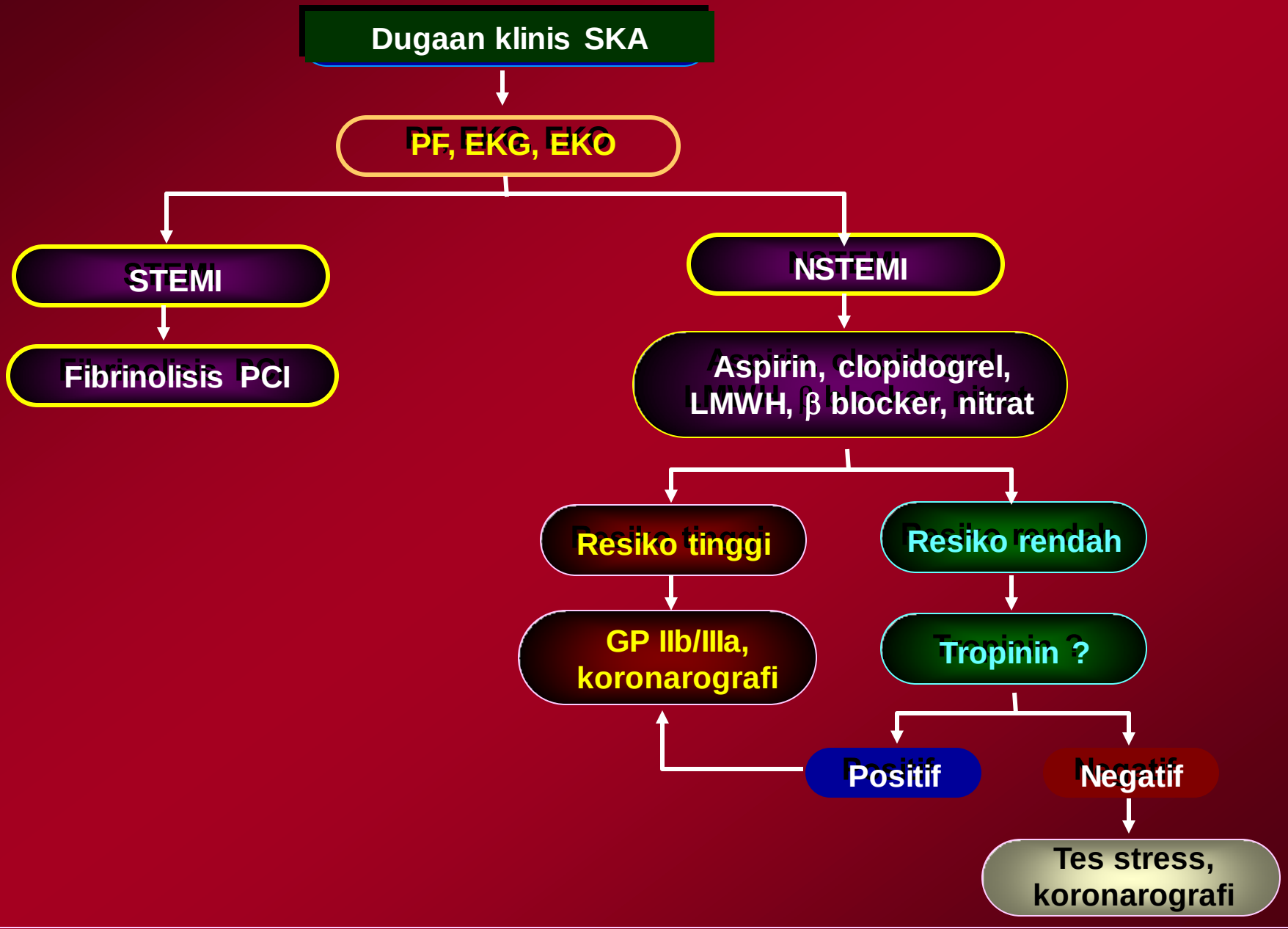
Acute coronary syndromes : initial assesment

Clinical classification of ACS

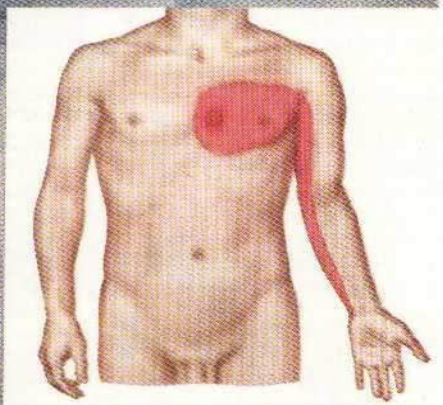


National Heart Foundation of Australia, Cardiac Society of Australia and New Zealand. *Med J Aust* 2000;173 (suppl):S65–S88

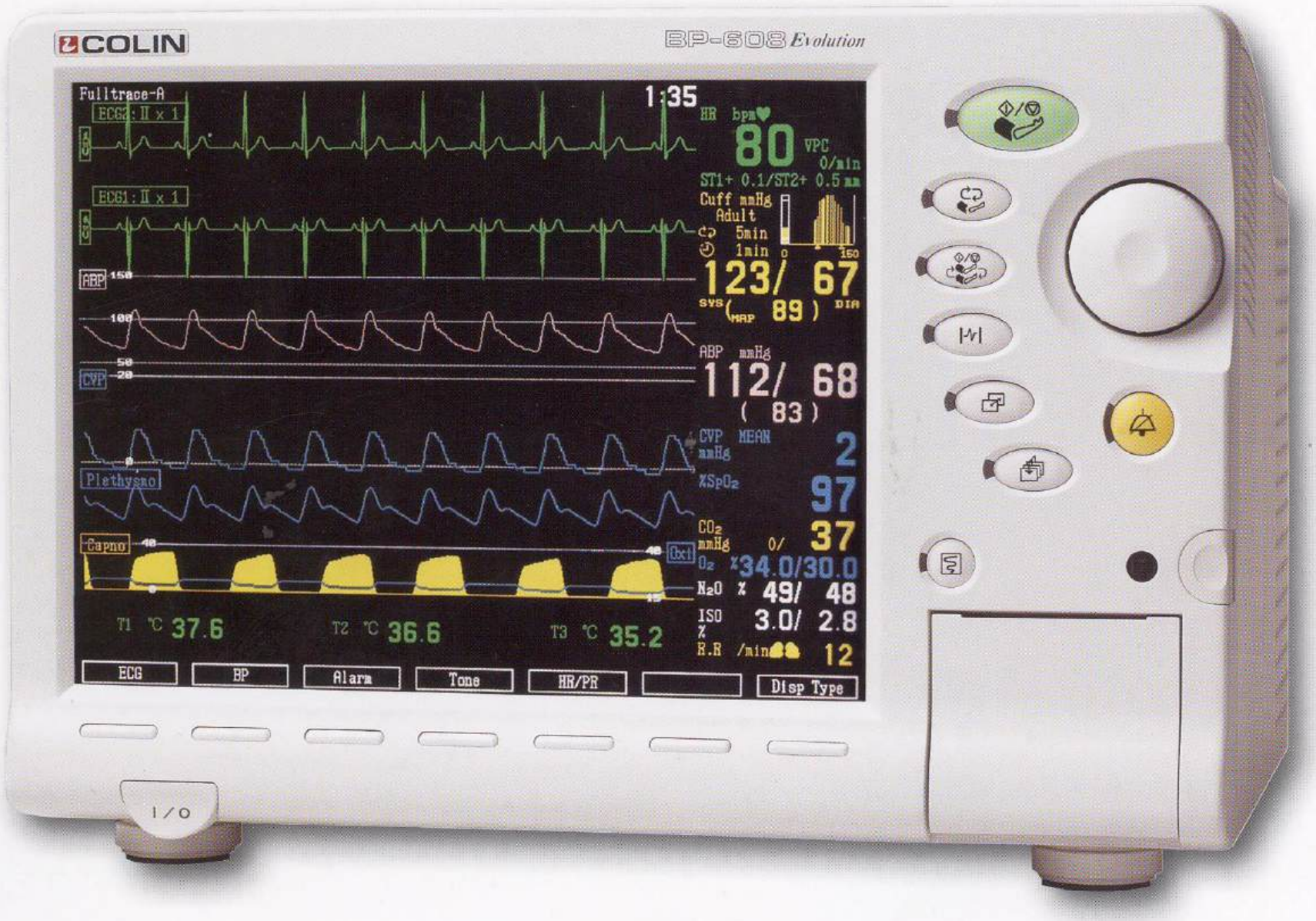
JALUR DIAGNOSIS DAN TERAPI



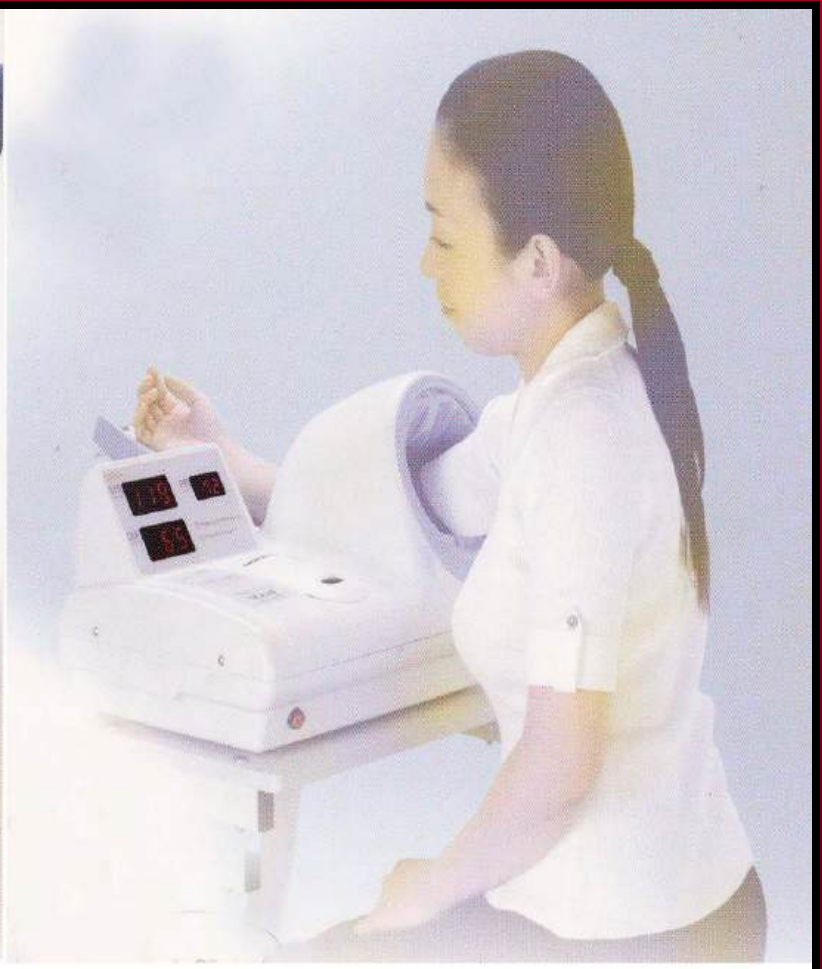
COMMON PRECIPITATING FACTORS IN ANGINA PECTORIS: HEAVY MEAL, EXERTION, COLD, SMOKING

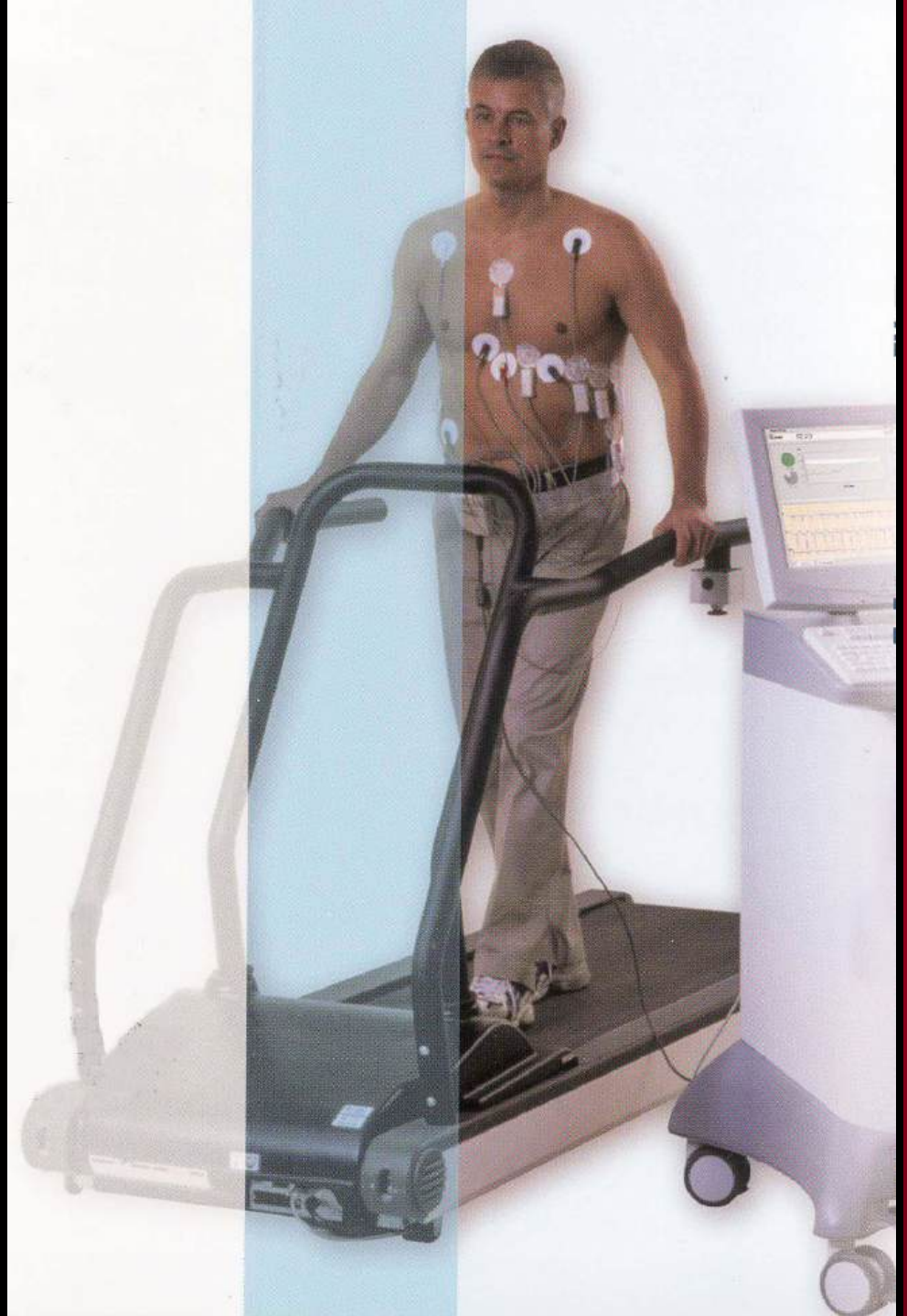


CHARACTERISTIC DISTRIBUTION OF PAIN IN ANGINA PECTORIS

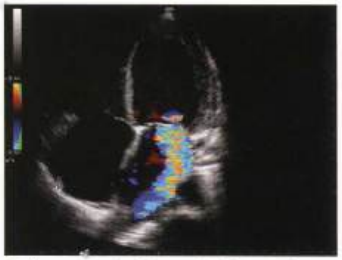

COLIN
BP-608 Evolution
Fulltrace-A
1:35
ECG2 : II x 1
ECG1 : II x 1
ABP
CVP
Plethysmo
Capno
HR bpm
80
VPC
0/min
ST1+ 0.1/ST2+ 0.5
Cuff mmHg
Adult
5min
1min
123/ 67
SYS (MAP 89) DIA
ABP mmHg
112/ 68
(83)
CVP mmHg MEAN
2
%SpO2
97
CO2 mmHg
37
O2 %
34.0/30.0
N2O %
49/ 48
ISO %
3.0/ 2.8
R.R /min
12
T1 °C 37.6
T2 °C 36.6
T3 °C 35.2
ECG
BP
Alarm
Tone
HR/PR
Disp Type
I/O


colin
SYS
119
PR
72
DIA
65



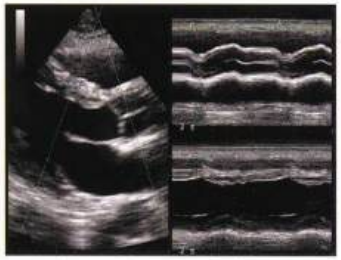


hhI
H Harmonic Imaging



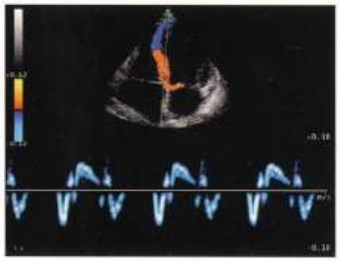
- The extended bandwidth and Multiple Frequency transducers provide optimal results in terms of penetration and spatial resolution.

afM
Angle-Free M-Mode



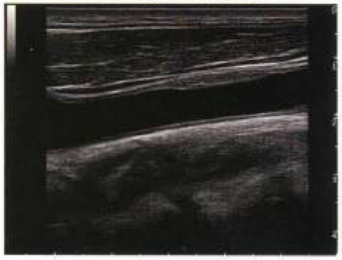
- By placing the M-mode line in any position, measurements accuracy and patient comfort are ensured.

ktM
Kinetic Tissue Mapping



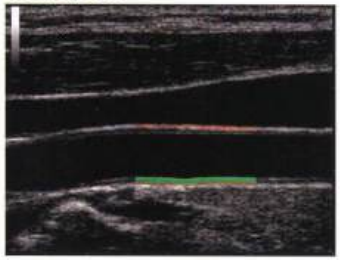
- Doppler based cardiac walls kinetics is easily displayed. The spectral representation allows a quantitative assessment of LV dysfunctions.

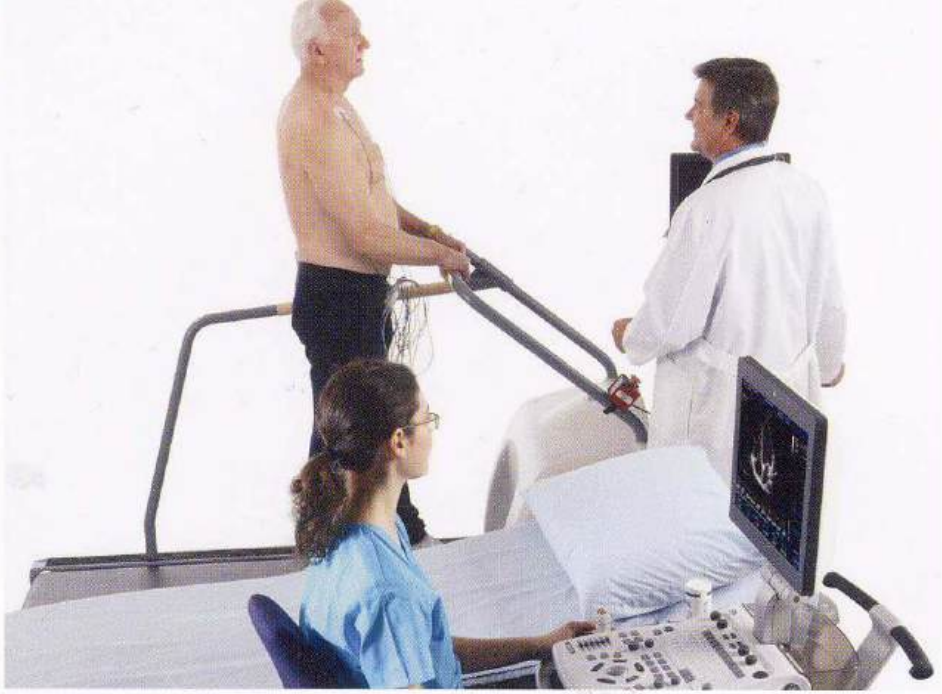
diP maMODE
Digital Imaging Process and Multi-Angle Imaging



msI
2D Myocardial Strain Imaging

QimT
Quality IMT

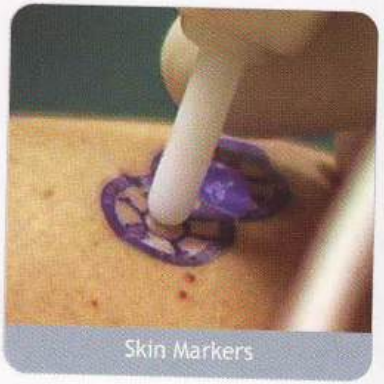




Supine Exam

Free Positioning System

CT/MR Examination



Skin Markers

KELUHAN UTAMA SINDROM KORONER AKUT

Sakit dada atau nyeri hulu hati yang berat, asalnya non-traumatik, dengan ciri-ciri tipikal iskemia miokard atau infark :

- Dada bagian tengah/substernal rasa tertekan atau sakit seperti diremas
- Rasa sesak, berat/tertimpa beban, mencengkeram, terbakar, sakit.
- Sakit perut yg tdk dpt dijelaskan, sendawa, nyeri hulu hati
- Penjalaran ke leher, rahang, bahu, punggung atau 1 atau ke2 lengan
- Disertai sesak
- Disertai mual dan/atau muntah
- Disertai berkeringat

Stat ECG

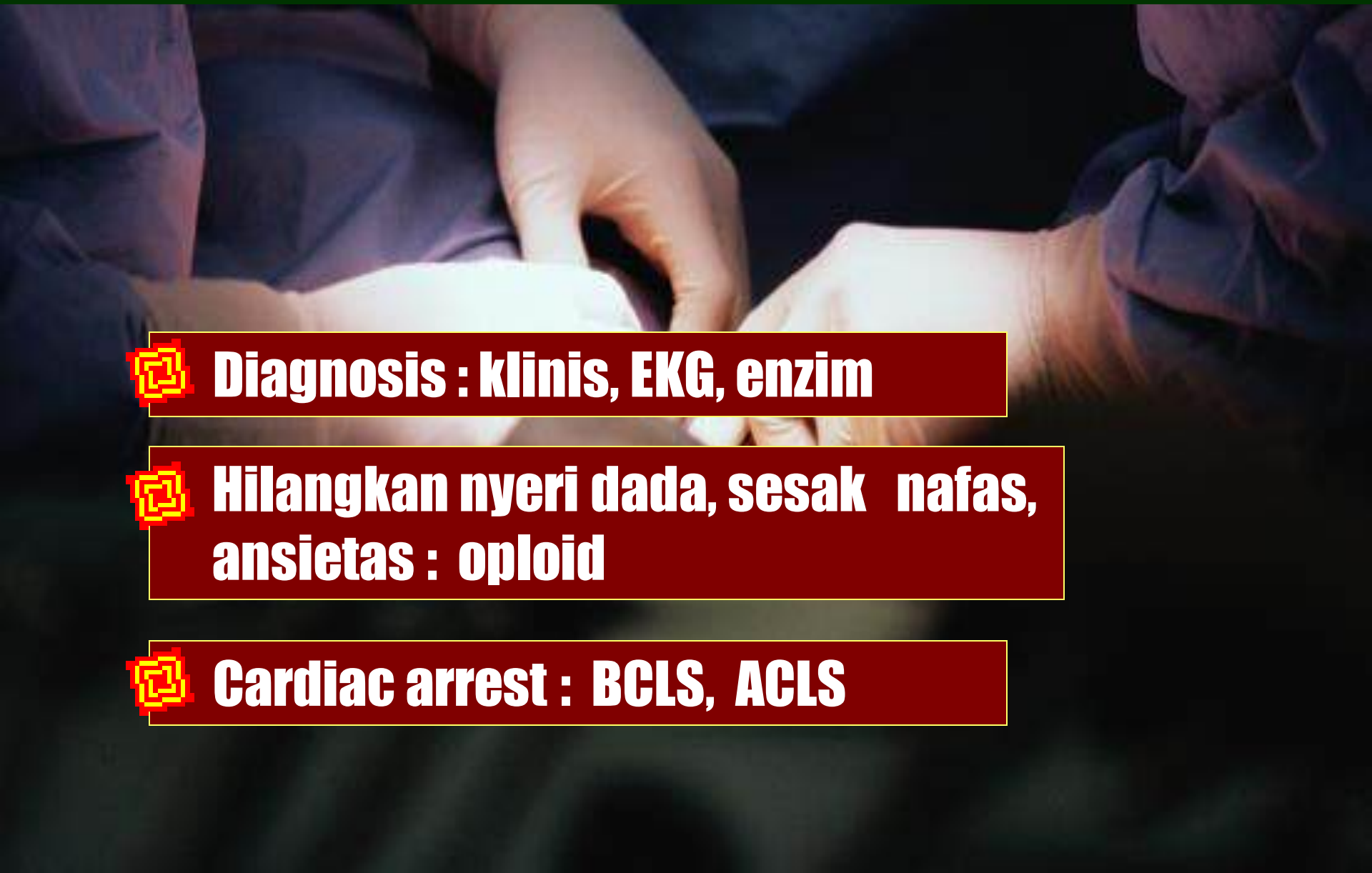
TUJUAN PENATALAKSANAAN SKA

- Hindari kematian
- Hilangkan keluhan dan stress
- Batasi kerusakan miokard

TIGA FASE PENATALAKSANAAN

- **Perawatan emergensi :**
  - nyeri dada, cardiac arrest
- **Perawatan awal :**
  - reperfusi, komplikasi
- **Perawatan lanjut :**
  - kematian, komplikasi

PERAWATAN EMERGENSI



- Diagnosis : klinis, EKG, enzim
- Hilangkan nyeri dada, sesak nafas, ansietas : opioid
- Cardiac arrest : BCLS, ACLS

HILANGKAN CHEST PAIN

Morfin sulfat : iv 2,5 - 5 mg (titrasi)

im 10 - 15 mg

dosis total 20 mg

Awas efek vagotonik

Tidak untuk inferior

Pethidin : im 25 - 50 mg

bisa diulang 10 - 30 menit

Nitrigliserin sublingual : 0,3 mg

bisa diulang tiap 5 - 10 menit

PERAWATAN AWAL

Referfusi :

Trombolik, vasodilator, PTCA, CABG

Tangani komplikasi :

Gagal jantung, syok, ruptur, aritmia, tromboemboli

Terapi profilaksis :

Antiplatelet agregasi, anti aritmia, β blocker