ACTUALIZACIÓN EN SÍNDROME CORONARIO AGUDO

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TABLA DE CONTENIDO

2023 ESC Guidelines for the management of acute coronary syndromes

Developed by the task force on the management of acute coronary syndromes of the European Society of Cardiology (ESC)

ESC European Society of Cardiology

Triaje y diagnóstico

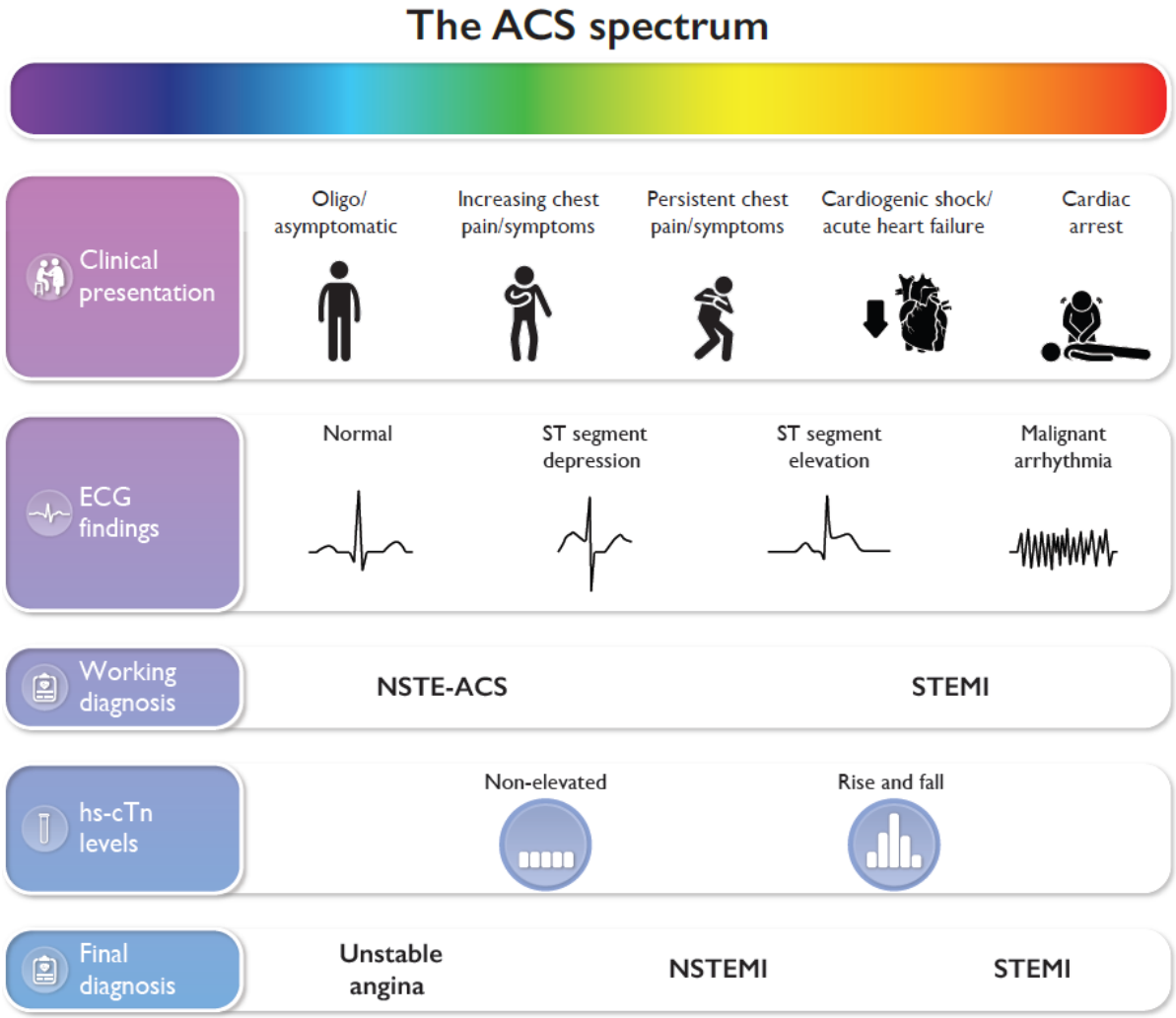
Manejo agudo

Inestabilidad

Abordaje inicial

Terapia antitrombótica

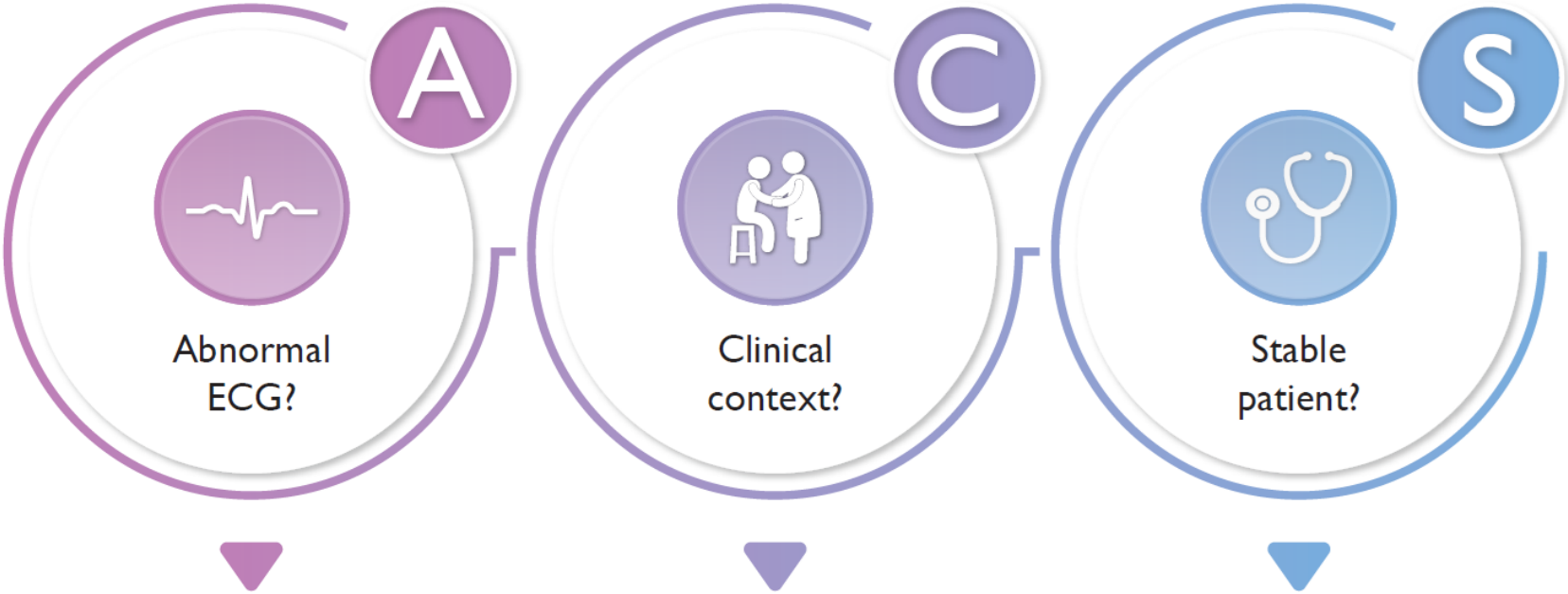
INTRODUCCIÓN



PRESENTACIÓN CLÍNICA

- **Discomfort:** dolor, presión, pesadez, quemazón.
- **Descriptores:** cardíaco, posiblemente cardíaco, probablemente no cardíaco.
- Atípico.
- **Equivalentes:** disnea, dolor epigástrico, dolor en miembro superior, dolor en cuello.

PRESENTACIÓN CLÍNICA



HERRAMIENTAS DIAGNÓSTICAS

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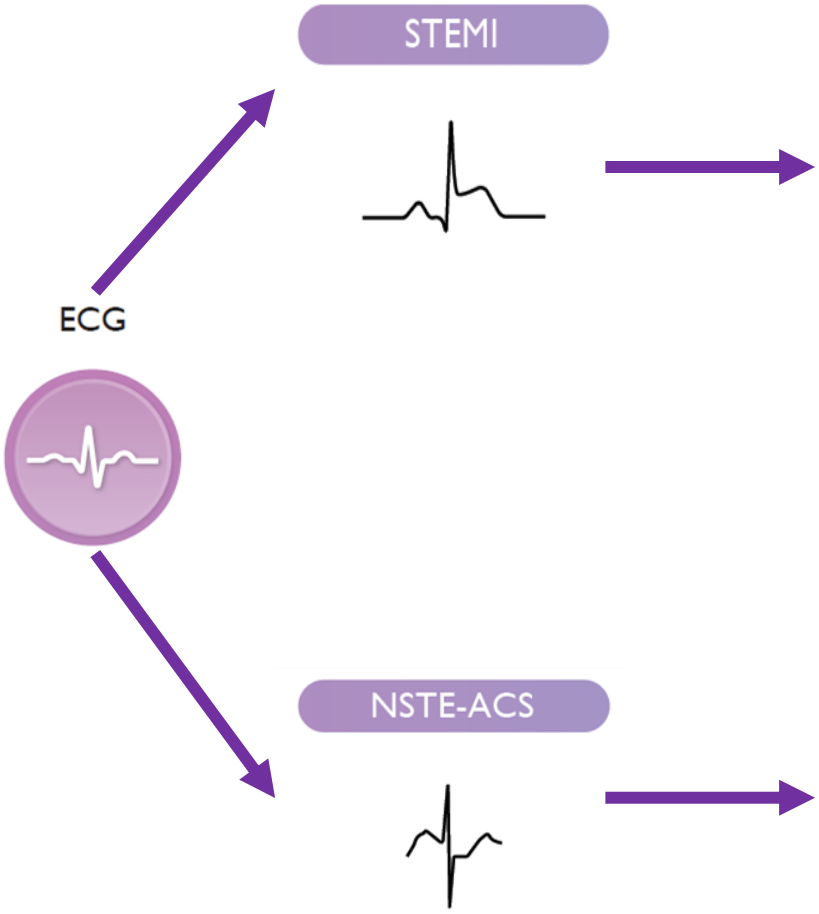


V2-V3:

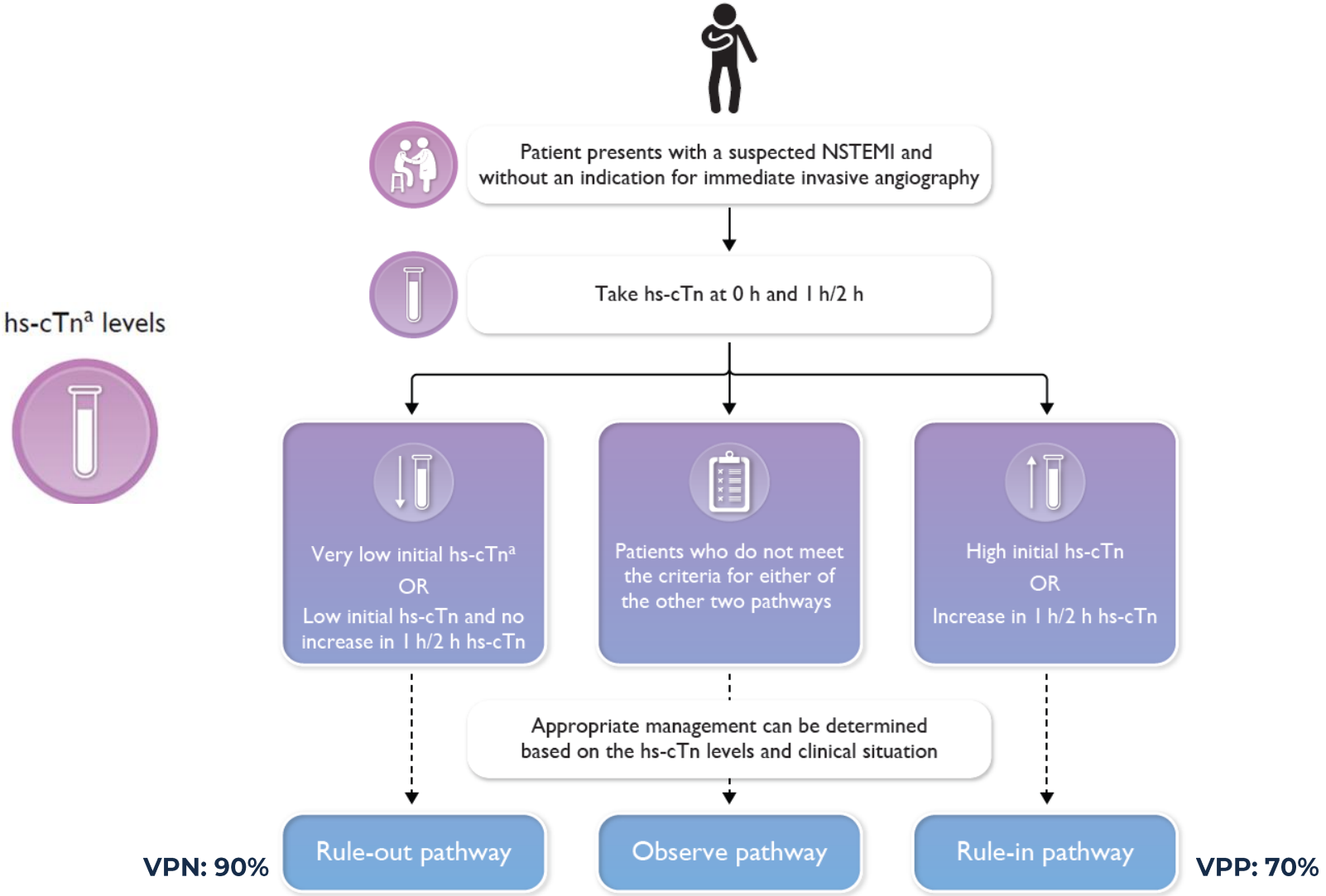
- ≥2.5mm en hombres <40 años, ≥ 2mm en hombres >40 años.
- ≥ 1.5 mm en mujeres independiente de la edad.

Otras derivadas:

- ≥ 1mm en las otras derivadas.

- Elevación transitoria.
- Depresión.
- Anormalidades de la onda T.
- Ondas T hiperagudas, T bifásicas.
- T aplanadas.
- Normal.

HERRAMIENTAS DIAGNÓSTICAS



VPN: 90%

VPP: 70%

HERRAMIENTAS DIAGNÓSTICAS

Table S4 **Assay specific cut-off levels in ng/L within the 0 h/1 h and 0 h/2 h algorithms**

0 h/1 h algorithm	Very low	Low	No 1 hΔ	High	1 hΔ
hs-cTnT (Elecsys; Roche)	<5	<12	<3	≥52	≥5
hs-cTnI (Architect; Abbott)	<4	<5	<2	≥64	≥6
hs-cTnI (Centaur; Siemens)	<3	<6	<3	≥120	≥12
hs-cTnI (Access; Beckman Coulter)	<4	<5	<4	≥50	≥15
hs-cTnI (Clarity; Singulex)	<1	<2	<1	≥30	≥6
hs-cTnI (Vitros; Clinical Diagnostics)	<1	<2	<1	≥40	≥4
hs-cTnI (Pathfast; LSI Medience)	<3	<4	<3	≥90	≥20
hs-cTnI (TriageTrue; Quidel)	<4	<5	<3	≥60	≥8
hs-cTnI (Dimension EXL; Siemens)	<9	<9	<5	≥160	≥100
0 h/2 h algorithm	**Very low**	**Low**	**No 2 hΔ**	**High**	**2 hΔ**
hs-cTnT (Elecsys; Roche)	<5	<14	<4	≥52	≥10
hs-cTnI (Architect; Abbott)	<4	<6	<2	≥64	≥15
hs-cTnI (Centaur; Siemens)	<3	<8	<7	≥120	≥20
hs-cTnI (Access; Beckman Coulter)	<4	<5	<5	≥50	≥20
hs-cTnI (Clarity; Singulex)	<1	TBD	TBD	≥30	TBD
hs-cTnI (Vitros; Clinical Diagnostics)	<1	TBD	TBD	≥40	TBD
hs-cTnI (Pathfast; LSI Medience)	<3	TBD	TBD	≥90	TBD
hs-cTnI (TriageTrue; Quidel)	<4	TBD	TBD	≥60	TBD

DIAGNÓSTICOS DIFERENCIALES

Table S5 **Differential diagnoses of acute coronary syndrome in the setting of acute chest pain**

Cardiac	Pulmonary	Vascular	Gastrointestinal	Orthopaedic	Other
Myocarditis/pericarditis, cardiomyopathies[a]	Pulmonary embolism	Aortic dissection	Oesophagitis, reflux, or spasm	Musculoskeletal disorders	Anxiety disorders
Tachyarrhythmias	(Tension) Pneumothorax	Symptomatic aortic aneurysm	Peptic ulcer, gastritis	Chest trauma	Herpes zoster
Acute heart failure	Bronchitis, pneumonia	Stroke	Pancreatitis	Muscle injury/ inflammation	Anaemia
Hypertensive emergencies	Pleuritis		Cholecystitis	Costochondritis	
Aortic valve stenosis				Cervical spine pathologies	
Takotsubo syndrome					
Coronary spasm					
Cardiac trauma					

MANEJO

PRE-HOSPITALARIO

Table S6 Key features of networks of care for the pre-hospital management of STEMI

- Clear definition of geographic areas of responsibility.
- Shared protocols, based on risk stratification and transportation by a trained physician, nurse, or paramedic staff in appropriately equipped ambulances or helicopters.
- Pre-hospital triage of patients with a STEMI working diagnosis, according to risk stratification (ECG and symptoms), to the appropriate centre, bypassing non-PCI hospitals or hospitals without a 24/7 service.
- On arrival at the appropriate hospital, the patient with suspected STEMI should be immediately taken to the catheterization laboratory, bypassing the ED and other ward areas.
- Patients presenting to a non-PCI-capable hospital and awaiting transportation for primary/rescue PCI must be attended to in an appropriately monitored and staffed area.
- If the working diagnosis of STEMI has not been made by the ambulance crew and the ambulance arrives at a non-PCI-capable hospital, the ambulance should wait for the diagnosis and, if a working diagnosis of STEMI is made, should continue to a PCI-capable hospital.

Estratificación según EKG

FARMACOTERAPIA AGUDA

- **Oxigeno:** hipoxemia <90%.

- **Nitratos:**
  - Si el dolor mejora se recomienda tomar otro EKG.
  - Evitar en: hipotensión, bradicardia o taquicardia marcada, infarto VD, estenosis aórtica grave o uso de iPD5.

- **Morfina:**
  - Aumentar náuseas y vómito, enlentecer la absorción gástrica de los medicamentos.
  - Disminuye el daño miocárdico al disminuir el consumo de oxígeno por disminuir la precarga y tener efecto cronotrópico e inotrópico negativo.

FARMACOTERAPIA AGUDA

- **Betabloqueadores IV:** metoprolol ha sido el más estudiado.
  - USAR: sin signos clínicos de falla cardíaca aguda, PAS >120mmHg, >70 años.
  - Se ha asociado con disminuir la incidencia de falla ventricular y obstrucción microvascular.

SELECCIÓN DE LA ESTRATEGIA INVASIVA

La elección de la estrategia de reperfusión inicial está basada en tres factores:

- EKG inicial.
- Contexto clínico.
- Estabilidad hemodinámica.

12-48 horas

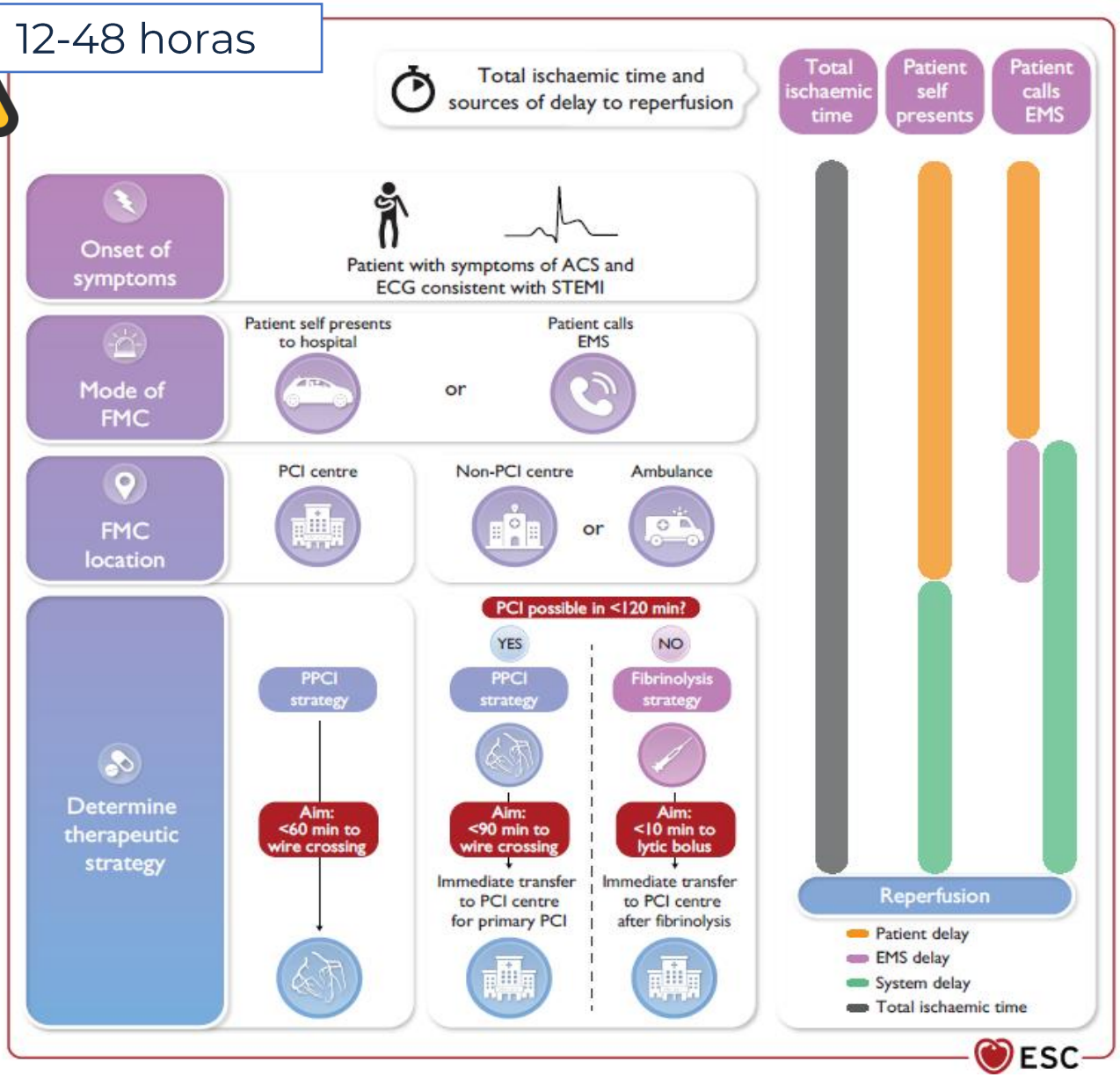
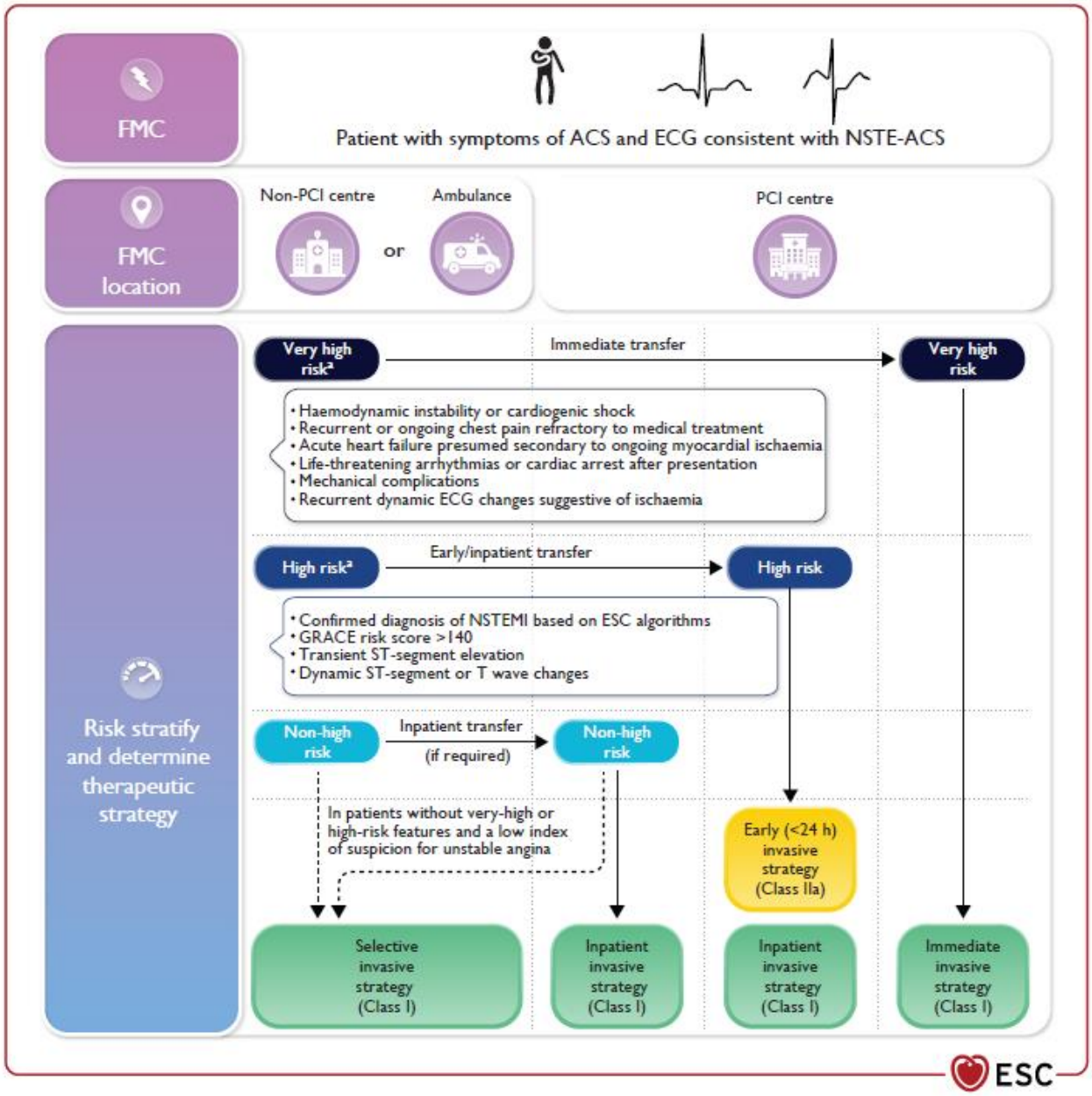
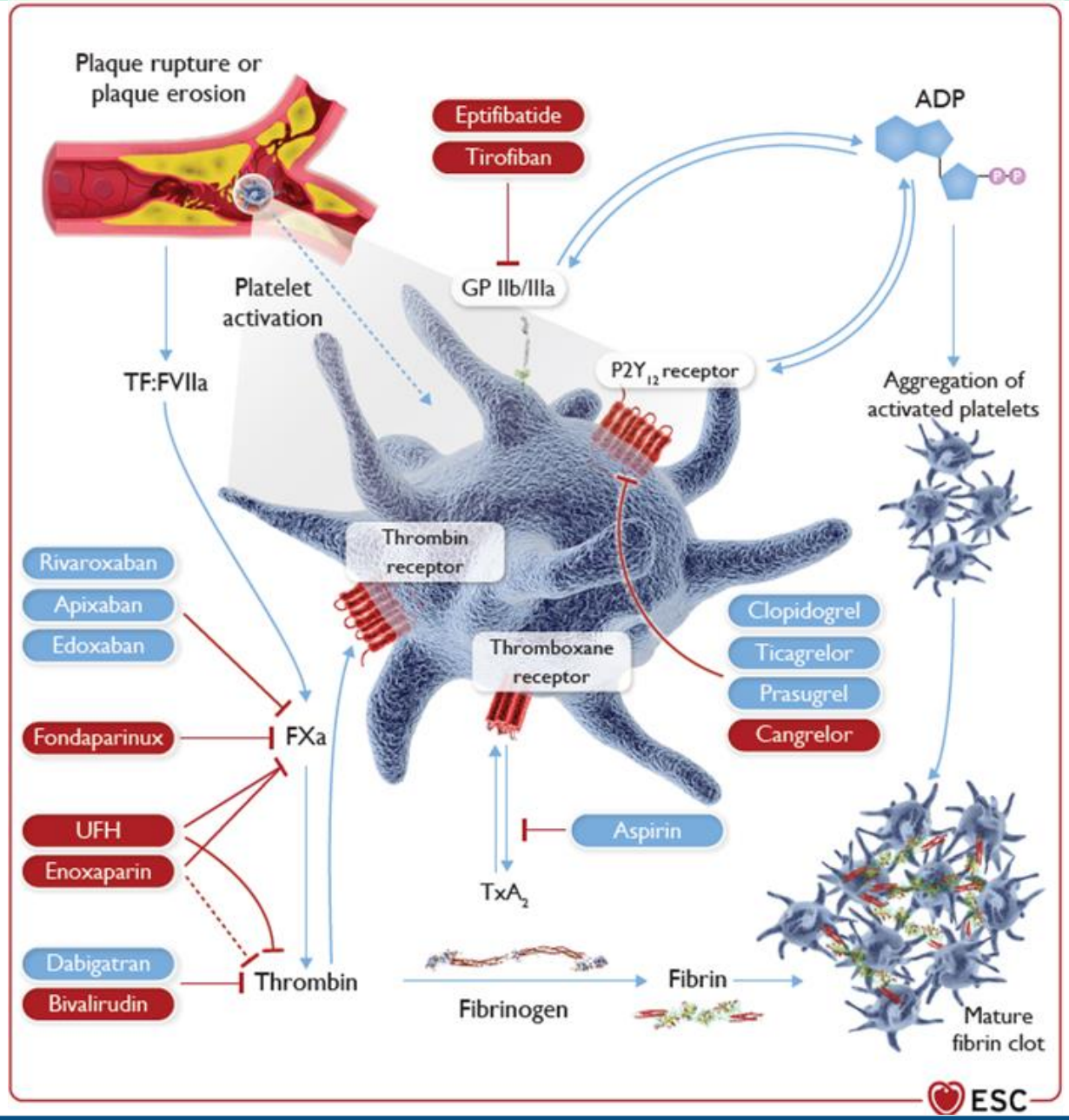


Table S10 **Doses of fibrinolytic agents and antithrombotic co-therapies**

Drug	Initial treatment	Specific contraindications
Streptokinase	1.5 million units over 30–60 min i.v.	Previous treatment with streptokinase or anistreplase
Alteplase (tPA)	15 mg i.v. bolus 0.75 mg/kg i.v. over 30 min (up to 50 mg) then 0.5 mg/kg i.v. over 60 min (up to 35 mg)	
Reteplase (rPA)	10 units + 10 units i.v. bolus given 30 min apart	
Tenecteplase (TNK-tPA)	Single i.v. bolus: 30 mg (6000 U) if <60 kg 35 mg (7000 U) if 60 to <70 kg 40 mg (8000 U) if 70 to <80 kg 45 mg (9000 U) if 80 to <90 kg 50 mg (10 000 U) if ≥90 kg It is recommended to reduce to half dose in patients ≥75 years of age.[153]	





TERAPIA ANTIPLAQUETARIA

Antiplatelet therapy		
Aspirin is recommended for all patients without contraindications at an initial oral LD of 150–300 mg (or 75–250 mg i.v.) and an MD of 75–100 mg o.d. for long-term treatment.[284,285]	I	A
In all ACS patients, a $P2Y_{12}$ receptor inhibitor is recommended in addition to aspirin, given as an initial oral LD followed by an MD for 12 months unless there is HBR[c].[238,239,263,286]	I	A
A proton pump inhibitor in combination with DAPT is recommended in patients at high risk of gastrointestinal bleeding.[287,288]	I	A

TERAPIA ANTIPLAQUETARIA

$P2Y_{12}$ receptor inhibitors (oral or i.v.)	
Clopidogrel	LD of 300–600 mg orally, followed by an MD of 75 mg o.d.; no specific dose adjustment in CKD patients. Fibrinolysis: at the time of fibrinolysis an initial dose of 300 mg (75 mg for patients older than 75 years of age).
Prasugrel	LD of 60 mg orally, followed by an MD of 10 mg o.d. In patients with body weight <60 kg, an MD of 5 mg o.d. is recommended. In patients aged ≥75 years, prasugrel should be used with caution, but a MD of 5 mg o.d. should be used if treatment is deemed necessary. No specific dose adjustment in CKD patients. Prior stroke is a contraindication for prasugrel.
Ticagrelor	LD of 180 mg orally, followed by an MD of 90 mg b.i.d.; no specific dose adjustment in CKD patients.
Cangrelor	Bolus of 30 mcg/kg i.v. followed by 4 mcg/kg/min infusion for at least 2 h or the duration of the procedure (whichever is longer). In the transition from cangrelor to a thienopyridine, the thienopyridine should be administered immediately after discontinuation of cangrelor with an LD (clopidogrel 600 mg or prasugrel 60 mg); to avoid a potential DDI, prasugrel may also be administered 30 min before the cangrelor infusion is stopped. Ticagrelor (LD 180 mg) should be administered at the time of PCI to minimize the potential gap in platelet inhibition during the transition phase.

TERAPIA ANTICOAGULANTE

Anticoagulant therapy		
Parenteral anticoagulation is recommended for all patients with ACS at the time of diagnosis.[255,296]	I	A
Routine use of a UFH bolus (weight-adjusted i.v. bolus during PCI of 70–100 IU/kg) is recommended in patients undergoing PCI.	I	C
Intravenous enoxaparin at the time of PCI should be considered in patients pre-treated with subcutaneous enoxaparin.[256,261,297]	IIa	B

Patients with STEMI		
Enoxaparin should be considered as an alternative to UFH in patients with STEMI undergoing PPCI.[258,261,298]	IIa	A
Bivalirudin with a full-dose post PCI infusion should be considered as an alternative to UFH in patients with STEMI undergoing PPCI.[259,299,300–303]	IIa	A
Fondaparinux is not recommended in patients with STEMI undergoing PPCI.[260]	III	B

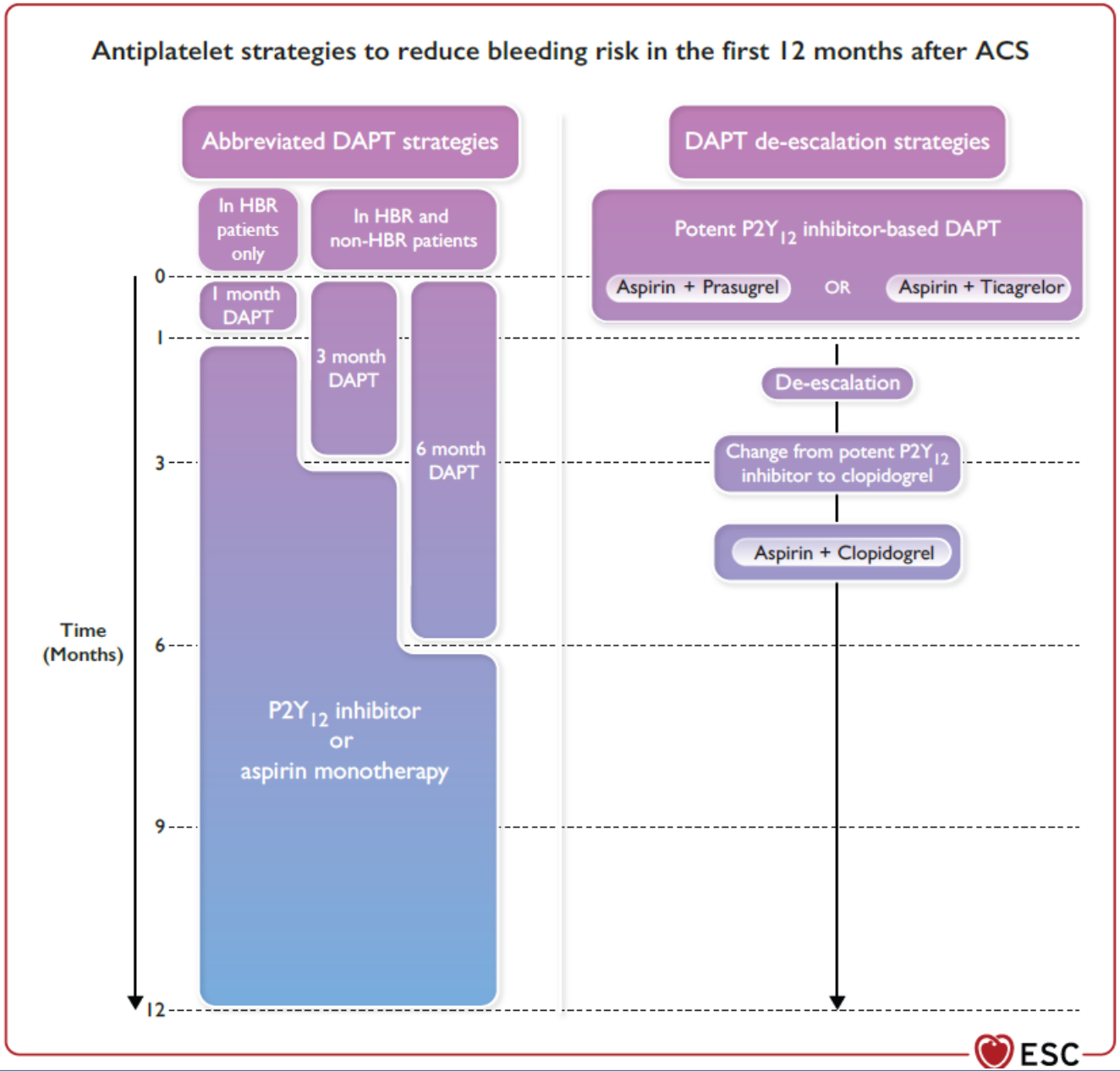
Patients with NSTE-ACS		
For patients with NSTE-ACS in whom early invasive angiography (i.e. within 24 h) is not anticipated, fondaparinux is recommended.[262,304]	I	B
For patients with NSTE-ACS in whom early invasive angiography (i.e. within 24 h) is anticipated, enoxaparin should be considered as an alternative to UFH.[256]	IIa	B

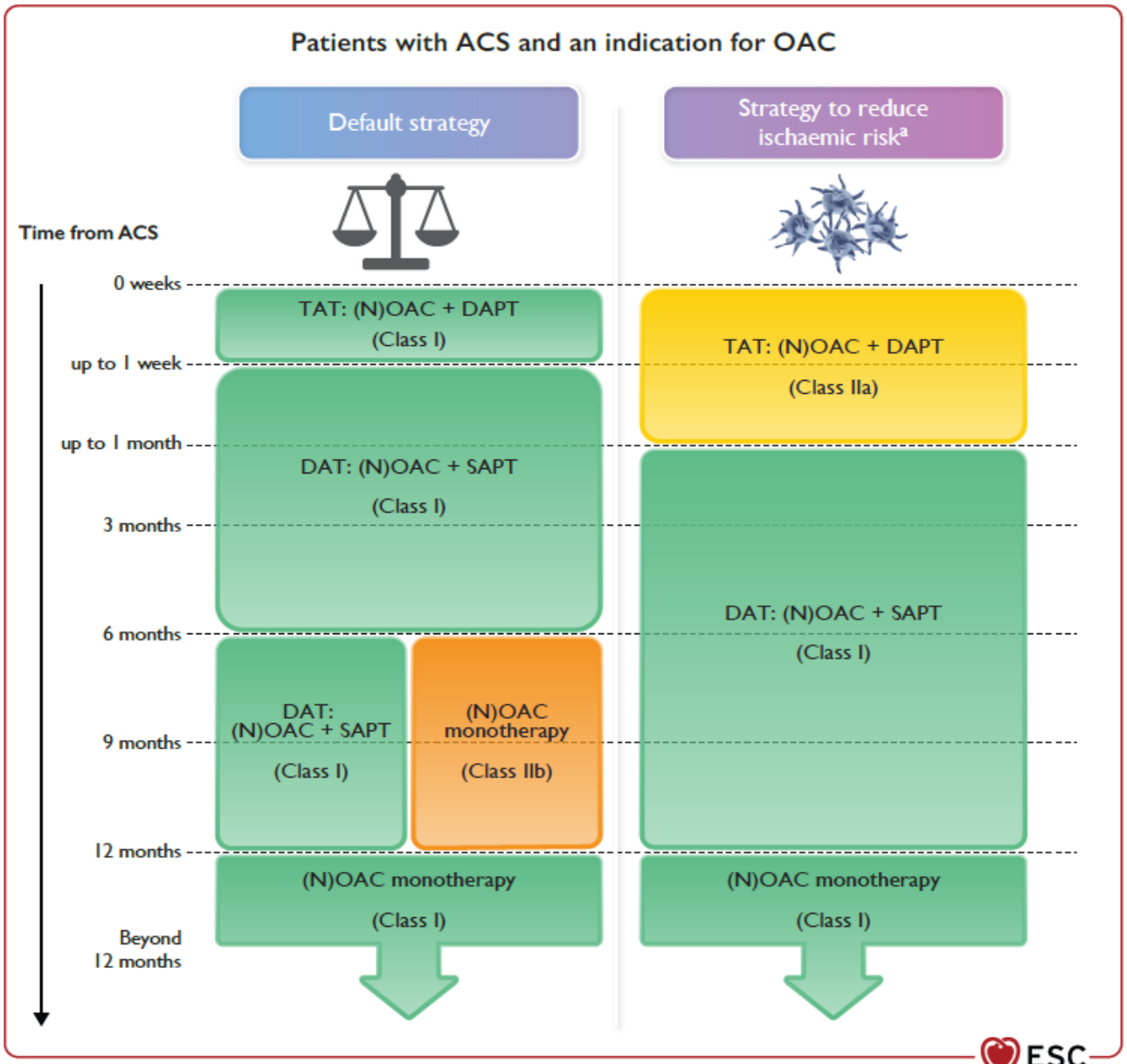
TERAPIA ANTICOAGULANTE

II. Anticoagulant drugs	
UFH	Initial treatment: i.v. bolus 70–100 U/kg followed by i.v. infusion titrated to achieve an aPTT of 60–80 s. During PCI: 70–100 U/kg i.v. bolus or according to ACT in case of UFH pre-treatment.
Enoxaparin	Initial treatment: for treatment of ACS 1 mg/kg b.i.d. subcutaneously for a minimum of 2 days and continued until clinical stabilization. In patients whose CrCl is below 30 mL per minute (by Cockcroft–Gault equation), the enoxaparin dosage should be reduced to 1 mg per kg o.d. During PCI: for patients managed with PCI, if the last dose of enoxaparin was given less than 8 h before balloon inflation, no additional dosing is needed. If the last s.c. administration was given more than 8 h before balloon inflation, an i.v. bolus of 0.3 mg/kg enoxaparin sodium should be administered.
Bivalirudin	During PPCI: 0.75 mg/kg i.v. bolus followed by i.v. infusion of 1.75 mg/kg/h for 4 h after the procedure. In patients whose CrCl is below 30 mL/min (by Cockcroft–Gault equation), maintenance infusion should be reduced to 1 mg/kg/h.
Fondaparinux	Initial treatment: 2.5 mg/d subcutaneously. During PCI: A single bolus of UFH is recommended. Avoid if CrCl <20 mL/min.

EN FIBRINOLISIS...

Antiplatelet co-therapy with fibrinolysis		
Aspirin and clopidogrel are recommended.[340–342]	I	A
Anticoagulation co-therapy with fibrinolysis		
Anticoagulation is recommended in patients treated with fibrinolysis until revascularization (if performed) or for the duration of hospital stay (up to 8 days).[260,347,348,350,357–360]	I	A
Enoxaparin i.v. followed by s.c. is recommended as the preferred anticoagulant.[347,348,357–360]	I	A
When enoxaparin is not available, UFH is recommended as a weight-adjusted i.v. bolus, followed by infusion.[357]	I	B
In patients treated with streptokinase, an i.v. bolus of fondaparinux followed by an s.c. dose 24 h later should be considered.[260]	IIa	B





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