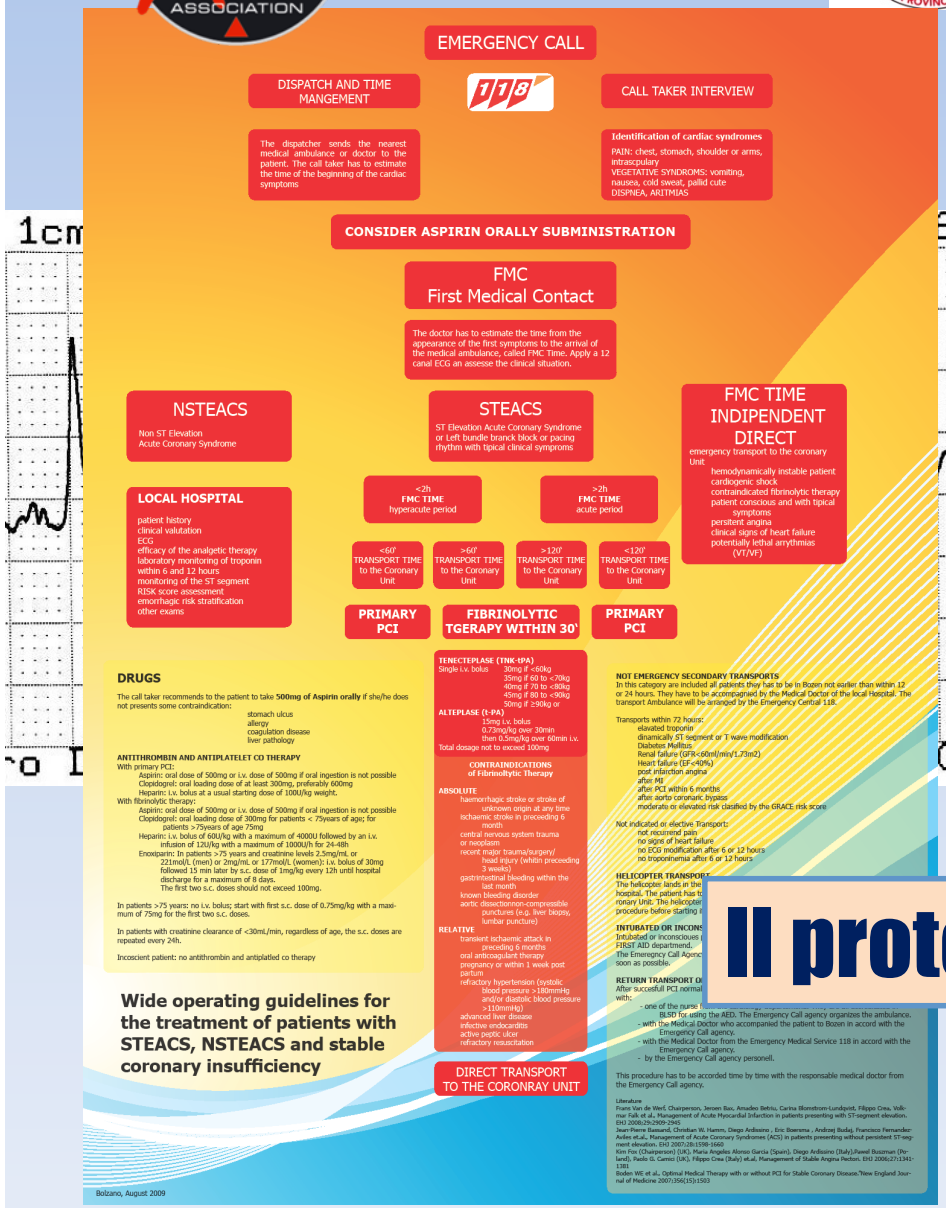
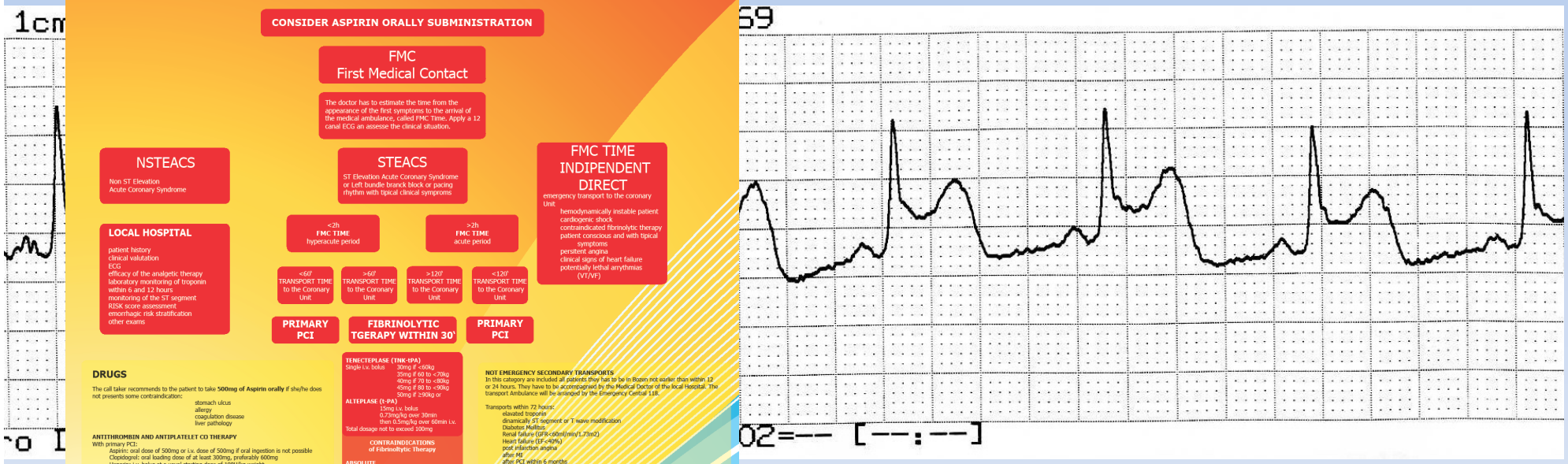




Il protocollo cardio di bolzano

Dolore toracico acuto :

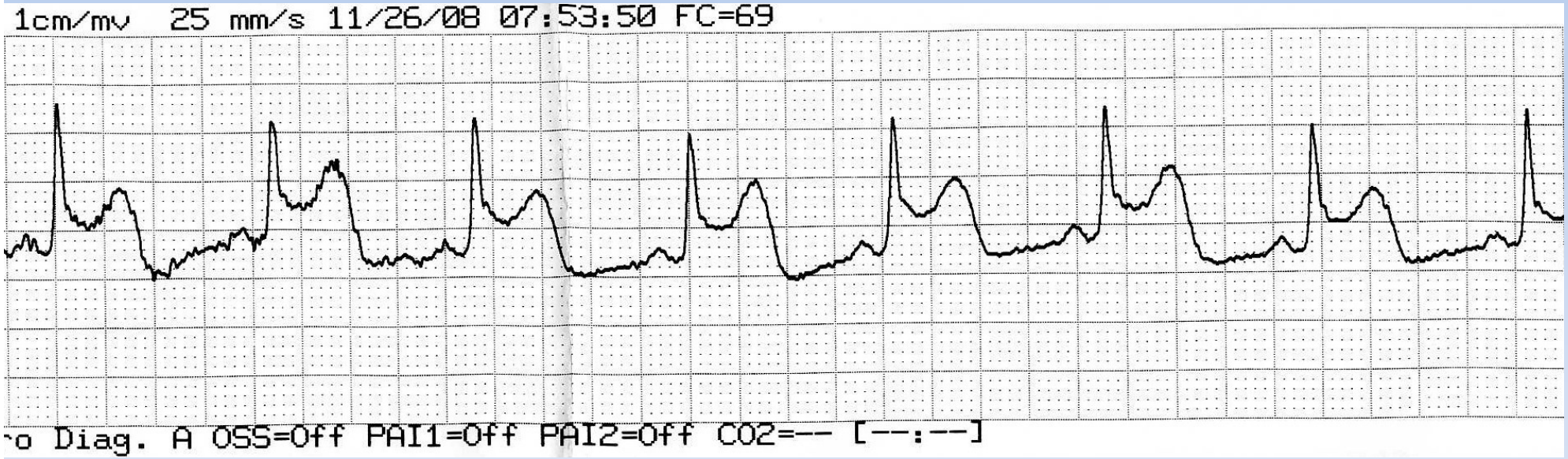
centralizzazione all’ ospedale centrale di Bolzano

Centralizzazione

- Paziente nell' ospedale a più alta specializzazione
- Razionalizzazione della diagnostica
- Iter decisionale abbreviato
- Minima compromissione dell' organizzazione del lavoro in Cardiologia ed UTIC
- Redistribuzione dei pazienti in periferia a terapia urgente terminata

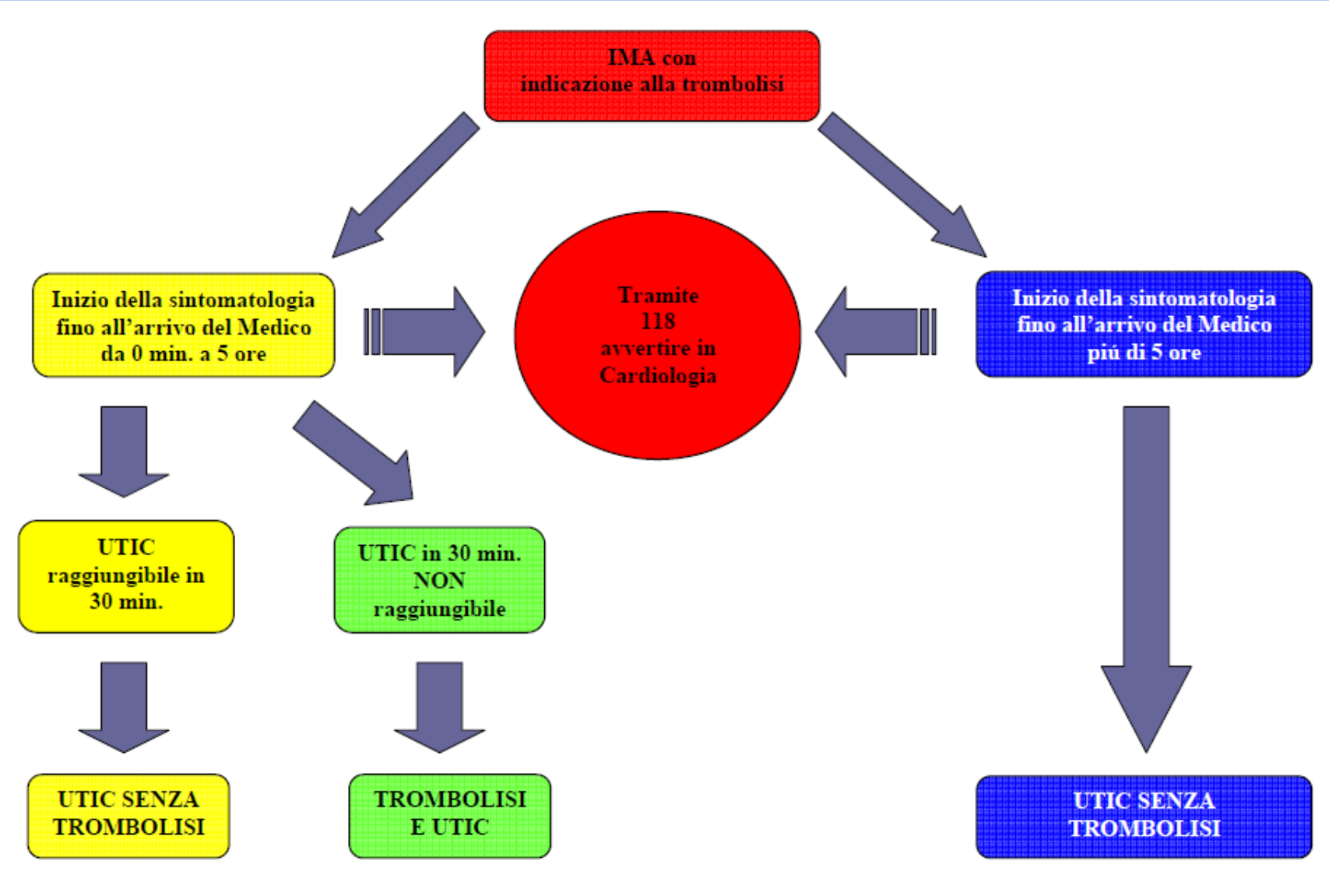
Ima conclamato

Difficile diagnosi sul campo
Difficile gestione terapeutica
Difficile gestione organizzativa

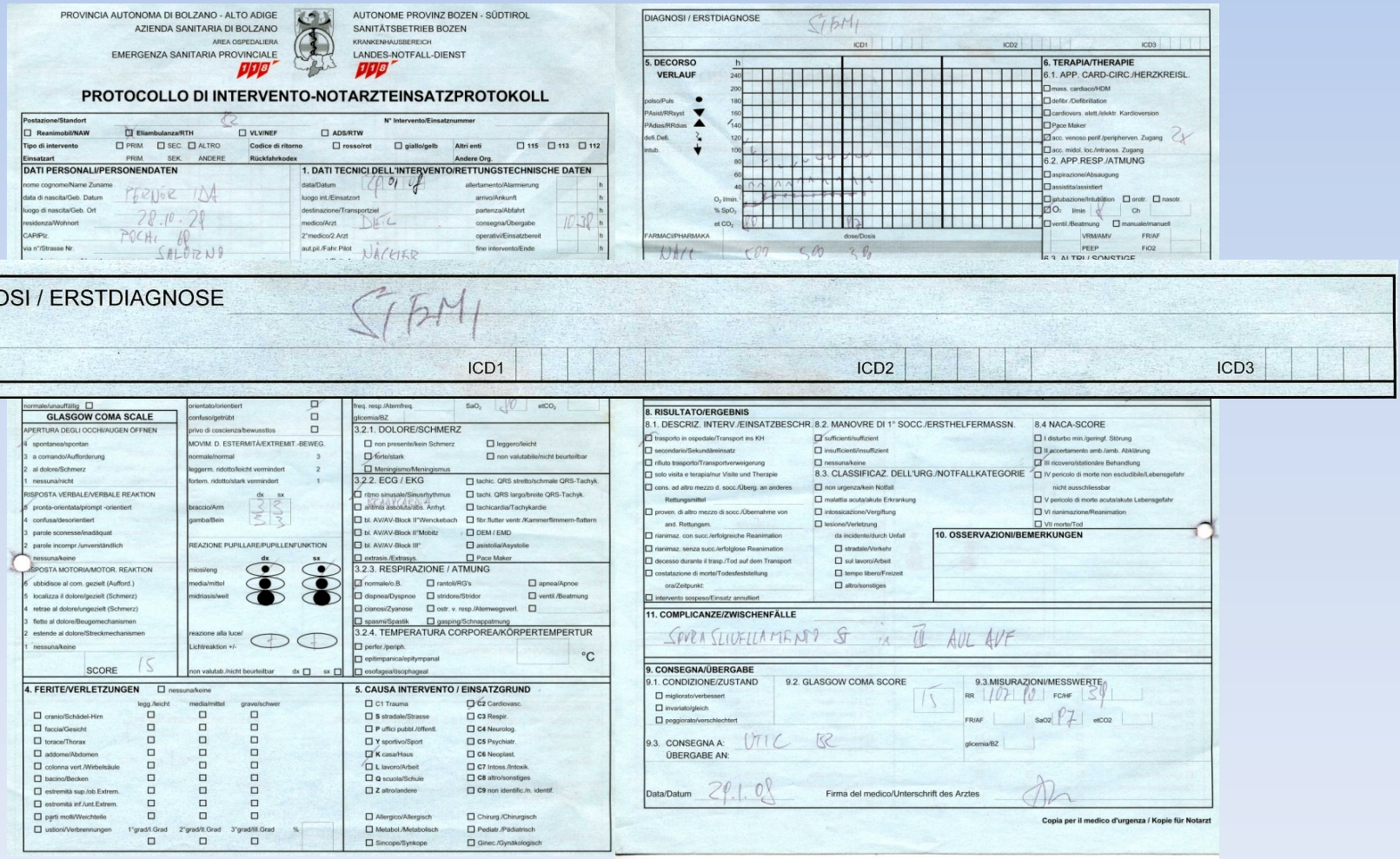


Non sempre è cosi evidente

ALGORITMO IMA



Due casi della propria casistica



PROVINCIA AUTONOMA DI BOLZANO - ALTO ADIGE
AZIENDA SANITARIA DI BOLZANO
AREA OSPEDALIERA
EMERGENZA SANITARIA PROVINCIALE

AUTONOME PROVINZ BOZEN - SÜDTIROL
SANITÄTSBETRIEB BOZEN
KRANKENHAUSBEREICH
LANDES-NOTFALL-DIENST

PROTOCOLLO DI INTERVENTO-NOTARZTEINSATZPROTOKOLL

DIAGNOSI / ERSTDIAGNOSE S I B M I

ICD1 ICD2 ICD3

GLASGOW COMA SCALE SCORE 15

4. FERITE/VERLETZUNGEN

5. CAUSA INTERVENTO / EINSATZGRUND

8. RISULTATO/ERGEBNIS

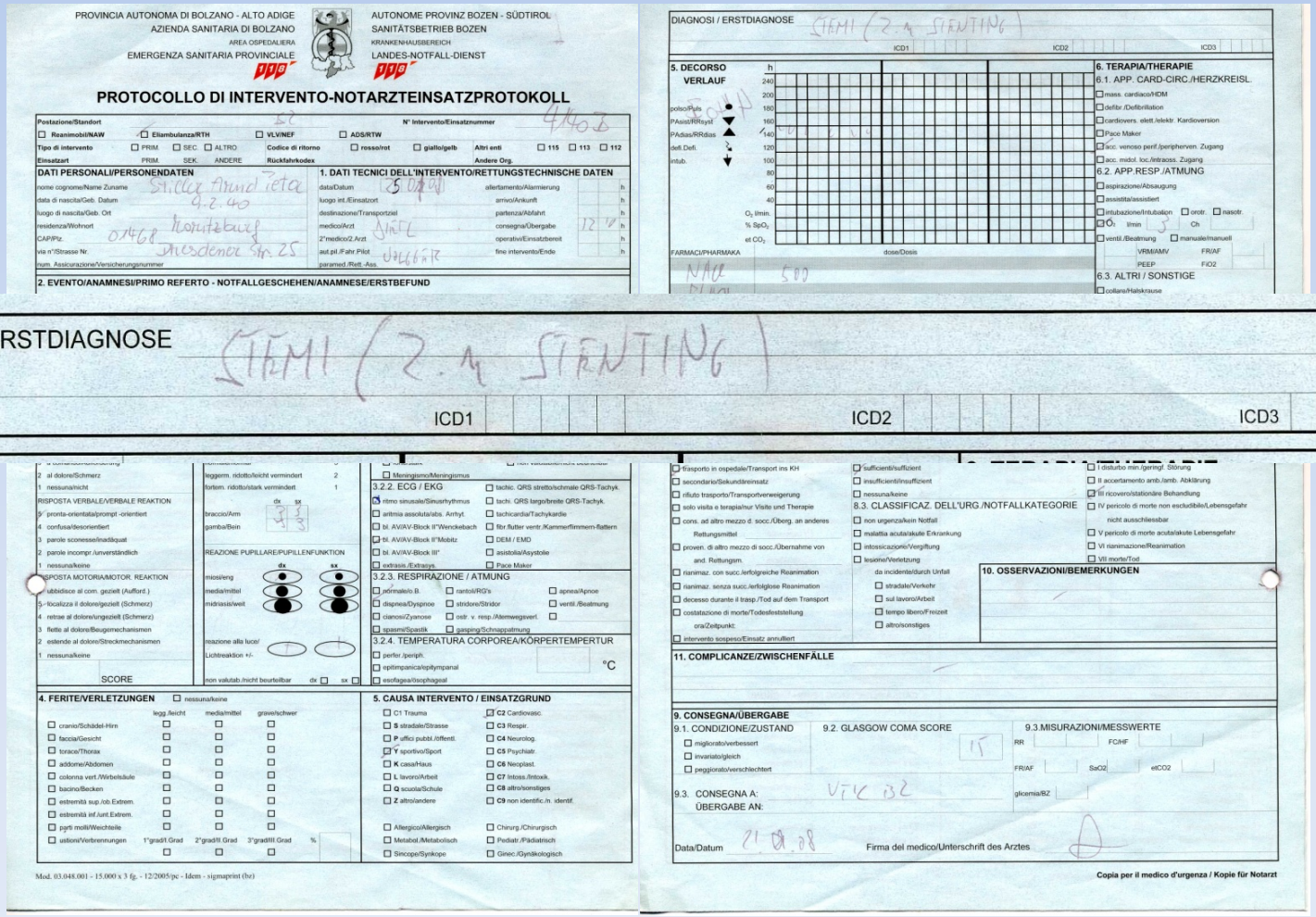
9. CONSEGNA/ÜBERGABE

10. OSSERVAZIONI/BEMERKUNGEN

11. COMPLICANZE/ZWISCHENFÄLLE

Data/Datum 29.1.08 Firma del medico/Unterschrift des Arztes

Copia per il medico d'urgenza / Kopie für Notarzt



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DIAGNOSI / ERSTDIAGNOSE (STEMI (2.4 STENTING)

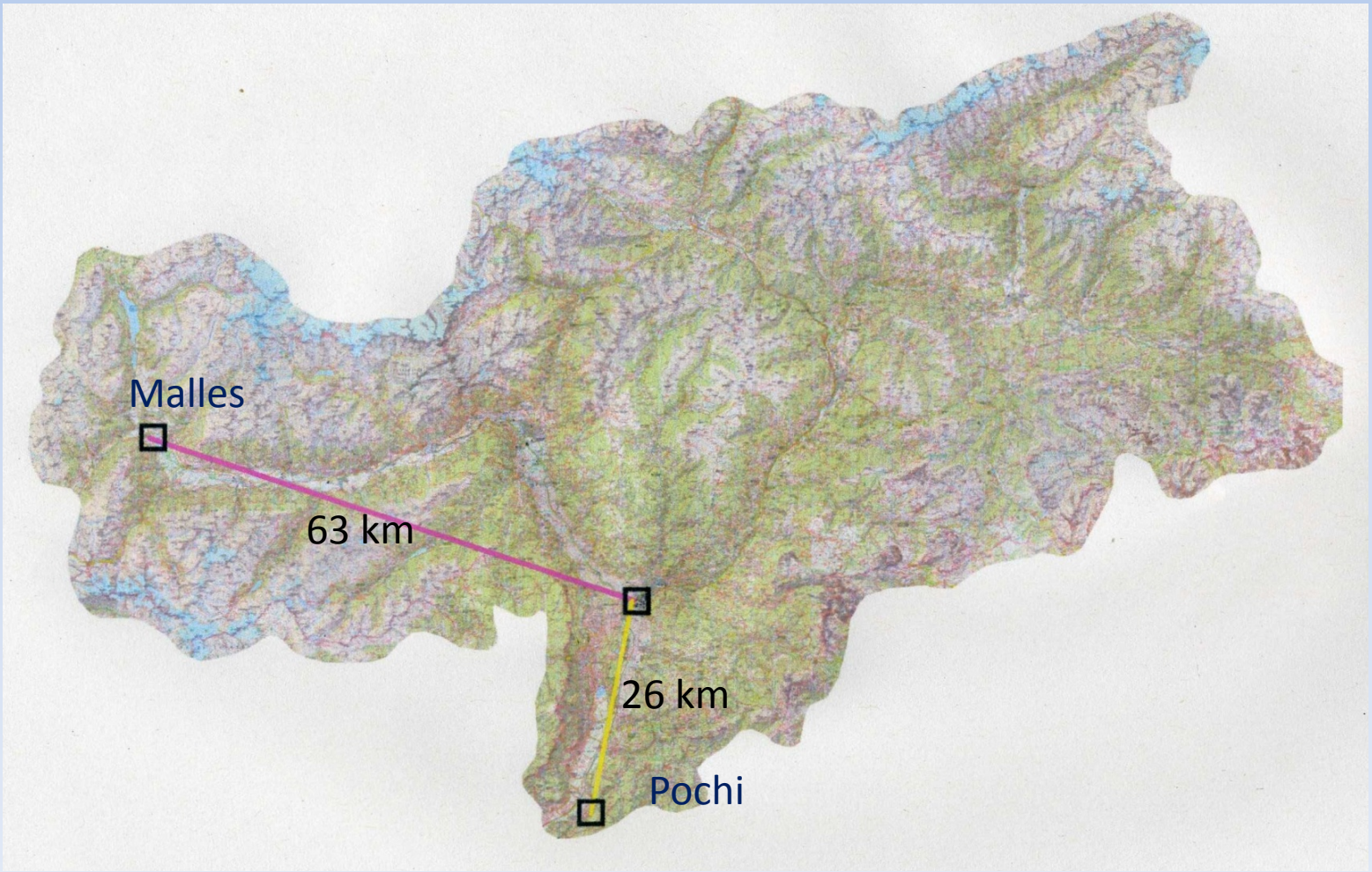
ICD1 ICD2 ICD3

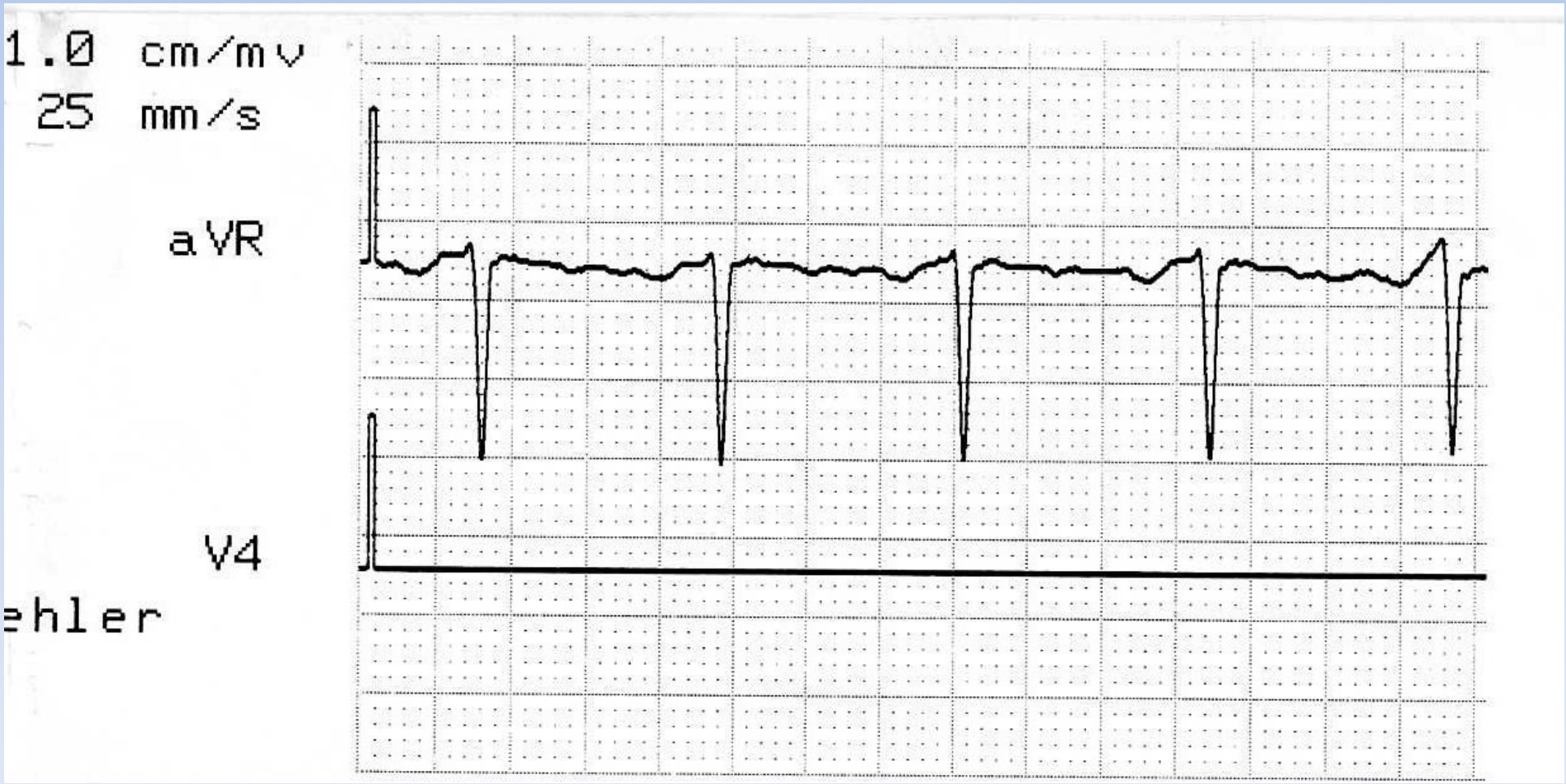
DIAGNOSI / ERSTDIAGNOSE (STEMI (2.4 STENTING)

ICD1 ICD2 ICD3

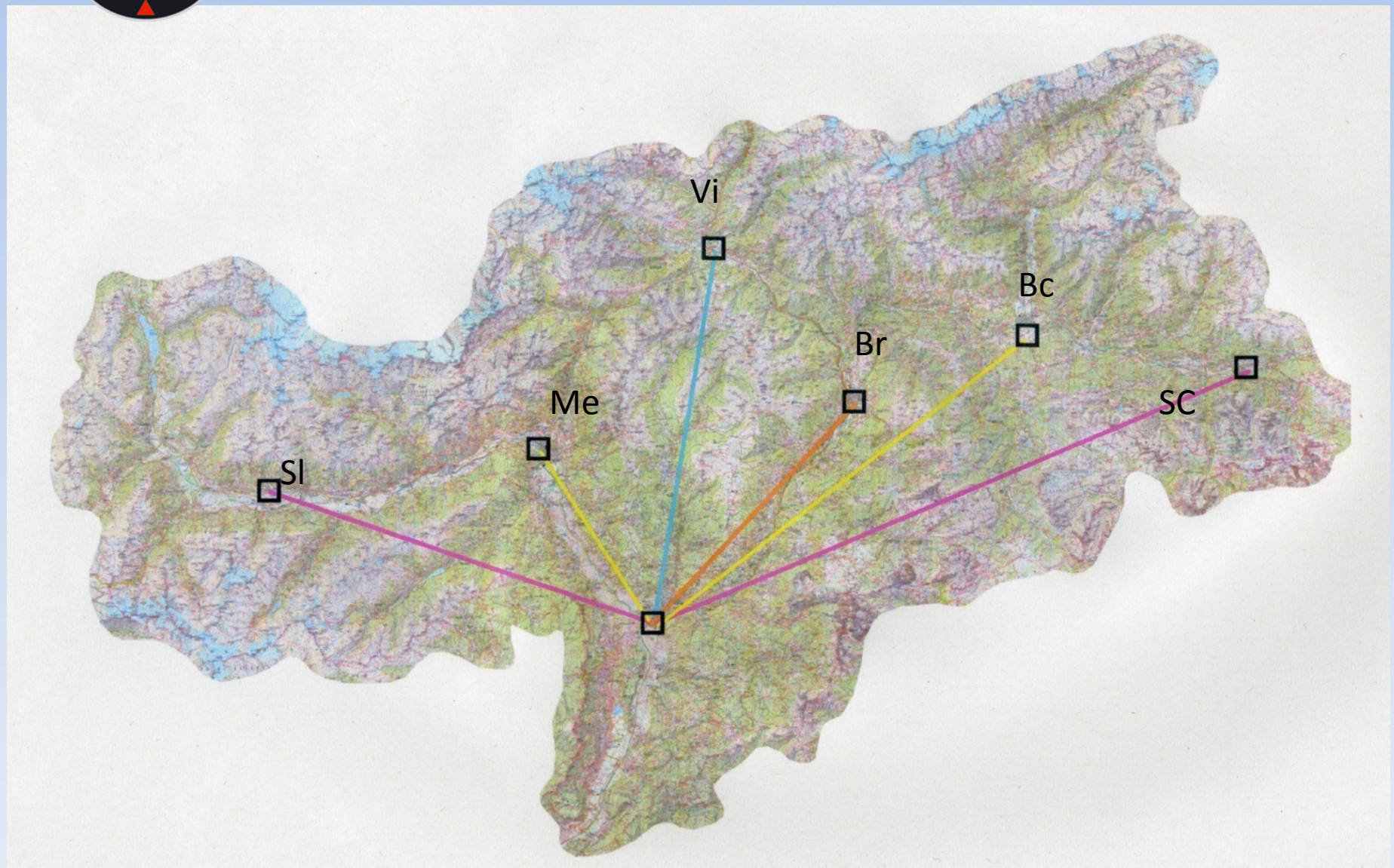
Mod. 03.048.001 - 15.000 x 3 fg. - 12/2005/pc - Idem - sigmaprint (bz)

Copia per il medico d'urgenza / Kopie für Notarzt


Malles
63 km
26 km
Pochi



Esito sperato


Vi
Bc
Br
Me
SC
Sl

Centralizzazione

- Paziente nell' ospedale a più alta specializzazione
- Razionalizzazione della diagnostica
- Iter decisionale abbreviato
- Redistribuzione dei pazienti in periferia a terapia urgente terminata

Trasporti secondari

Non sono qui considerati i trasporti generati da medici sul luogo dell' emergenza e pazienti affidati all' elisoccorso

Trasporti secondari

Nella propria casistica 01 -11/2008

81 interventi
19 trasporti secondari

Trasporti secondari

Pazienti cardiologici:

Da BZ verso VR	4
Dalla periferia a BZ	2
Da Bz ritrasferito ME	1

Dei 4 verso VR 1 solo era acuto

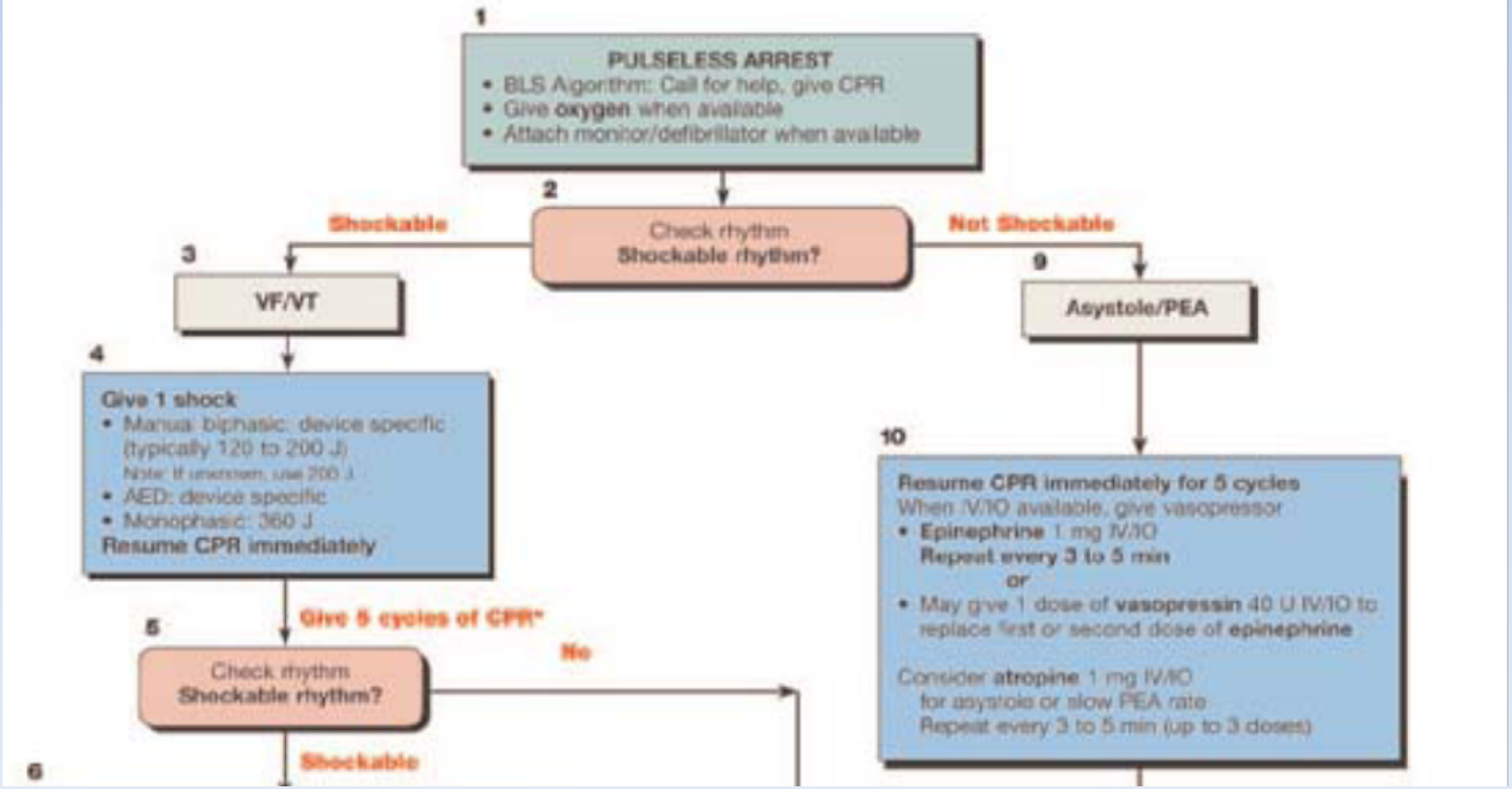
Trasporti secondari

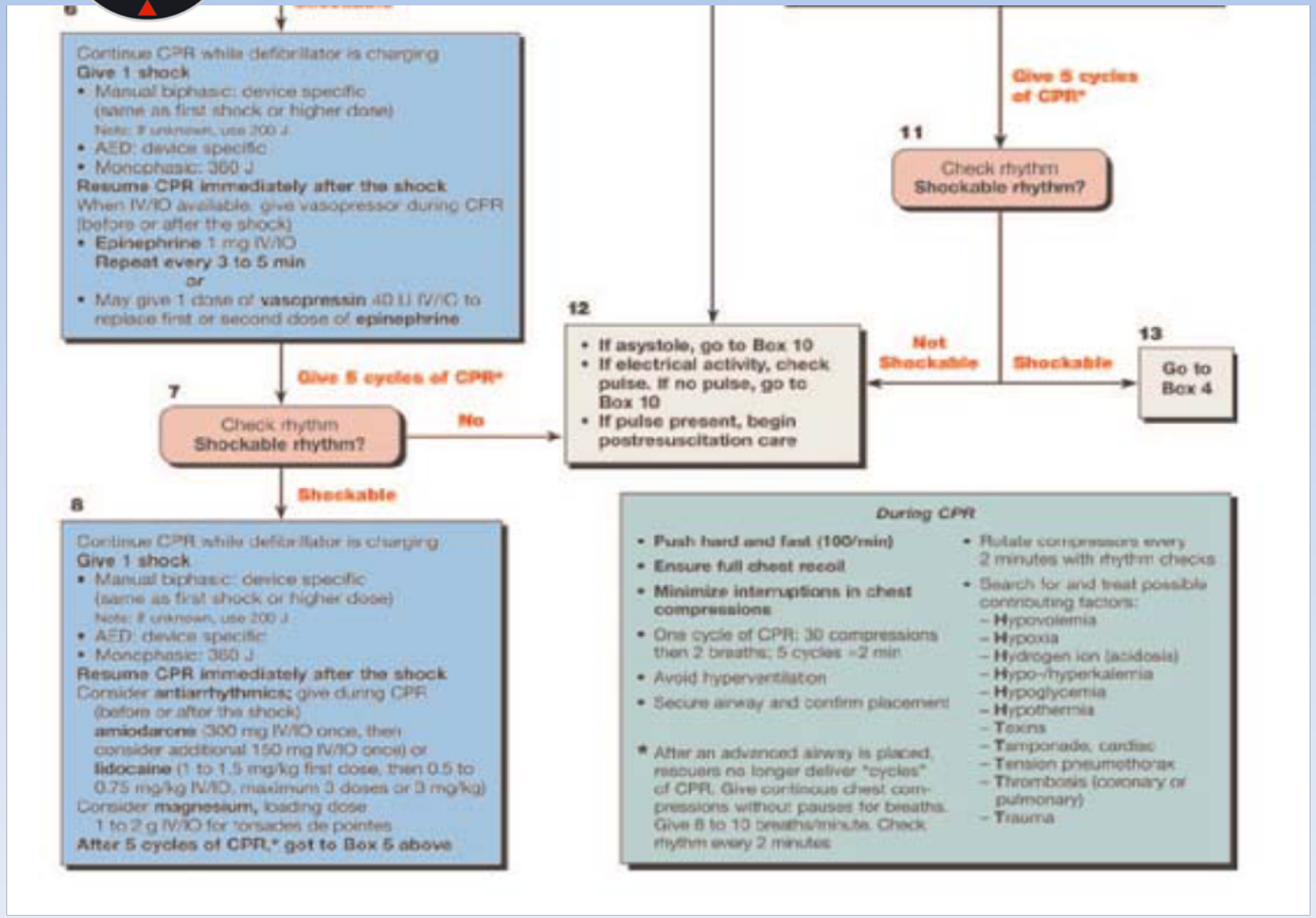
Restanti categorie:	
Per BZ	6
Da BZ	2
Me –TN	1
Me - I	1
Sl – I	1
Bc – I	1

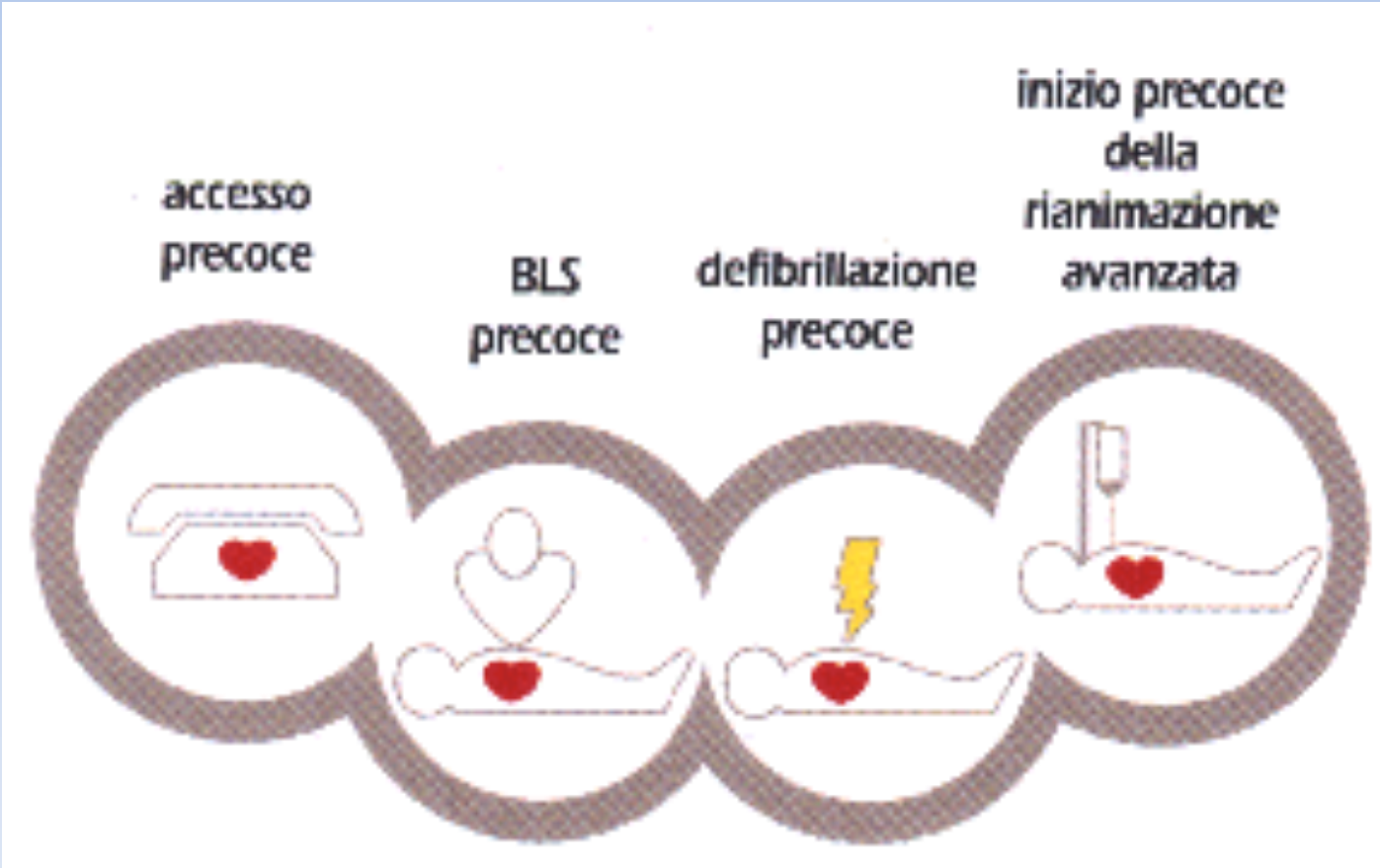
I trasporti secondari:

- devono essere gestiti con criteri chiari di emergenza
- in elisoccorso solo pazienti con parametri vitali compromessi
- gestione dei trasporti secondari a chi li genera
- chiara definizione cosa sia un trasporto secondario

Adult Advanced Life Support




6
Continue CPR while defibrillator is charging
Give 1 shock
• Manual biphasic: device specific (same as first shock or higher dose)
Note: If unknown, use 200 J
• AED: device specific
• Monophasic: 360 J
Resume CPR immediately after the shock
When IV/IO available, give vasopressor during CPR (before or after the shock)
• Epinephrine 1 mg IV/IO
Repeat every 3 to 5 min
or
• May give 1 dose of vasopressin 40 U IV/IO to replace first or second dose of epinephrine
Give 5 cycles of CPR*
7
Check rhythm
Shockable rhythm?
No
Shockable
8
Continue CPR while defibrillator is charging
Give 1 shock
• Manual biphasic: device specific (same as first shock or higher dose)
Note: If unknown, use 200 J
• AED: device specific
• Monophasic: 360 J
Resume CPR immediately after the shock
Consider antiarrhythmics; give during CPR (before or after the shock)
amiodarone (300 mg IV/IO once, then consider additional 150 mg IV/IO once) or
lidocaine (1 to 1.5 mg/kg first dose, then 0.5 to 0.75 mg/kg IV/IO, maximum 3 doses or 3 mg/kg)
Consider magnesium, loading dose 1 to 2 g IV/IO for torsades de pointes
After 5 cycles of CPR,* go to Box 5 above
12
• If asystole, go to Box 10
• If electrical activity, check pulse. If no pulse, go to Box 10
• If pulse present, begin postresuscitation care
Give 5 cycles of CPR*
11
Check rhythm
Shockable rhythm?
Not Shockable
Shockable
13
Go to Box 4
During CPR
• Push hard and fast (100/min)
• Ensure full chest recoil
• Minimize interruptions in chest compressions
• One cycle of CPR: 30 compressions then 2 breaths; 5 cycles ≈2 min
• Avoid hyperventilation
• Secure airway and confirm placement
• Rotate compressors every 2 minutes with rhythm checks
• Search for and treat possible contributing factors:
– Hypovolemia
– Hypoxia
– Hydrogen ion (acidosis)
– Hypo-/hyperkalemia
– Hypoglycemia
– Hypothermia
– Toxins
– Tamponade, cardiac
– Tension pneumothorax
– Thrombosis (coronary or pulmonary)
– Trauma
* After an advanced airway is placed, rescuers no longer deliver "cycles" of CPR. Give continuous chest compressions without pauses for breaths. Give 8 to 10 breaths/minute. Check rhythm every 2 minutes.

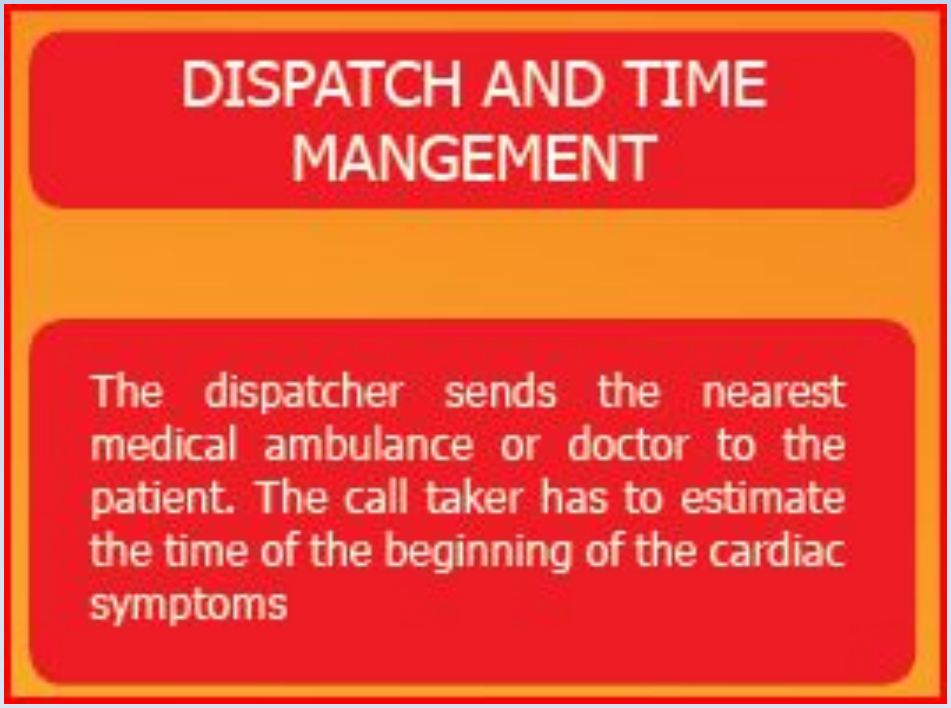

accesso precoce
BLS precoce
defibrillazione precoce
inizio precoce della rianimazione avanzata

- Chiamata d‘emergenza

Formazione utenti ed operatori

Sensibilità dell‘operatore

- Gestione oculata dell‘ interlocutore
- Corretta interpretazione del quadro situativo



Anamnesi circostanziata della tempistica

- Insorgere
- Decorso
- Prodromi
- Anamnesi remota

CONSIDER ASPIRIN ORALLY SUBMINISTRATION

-alta percentuale di pazienti
già in trattamento con cardioaspirina

-alta diffusione del farmaco
nelle scorte medicinali individuali

Anamnesi circostanziata della tempistica

- Insorgere
- Decorso
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- Anamnesi remota

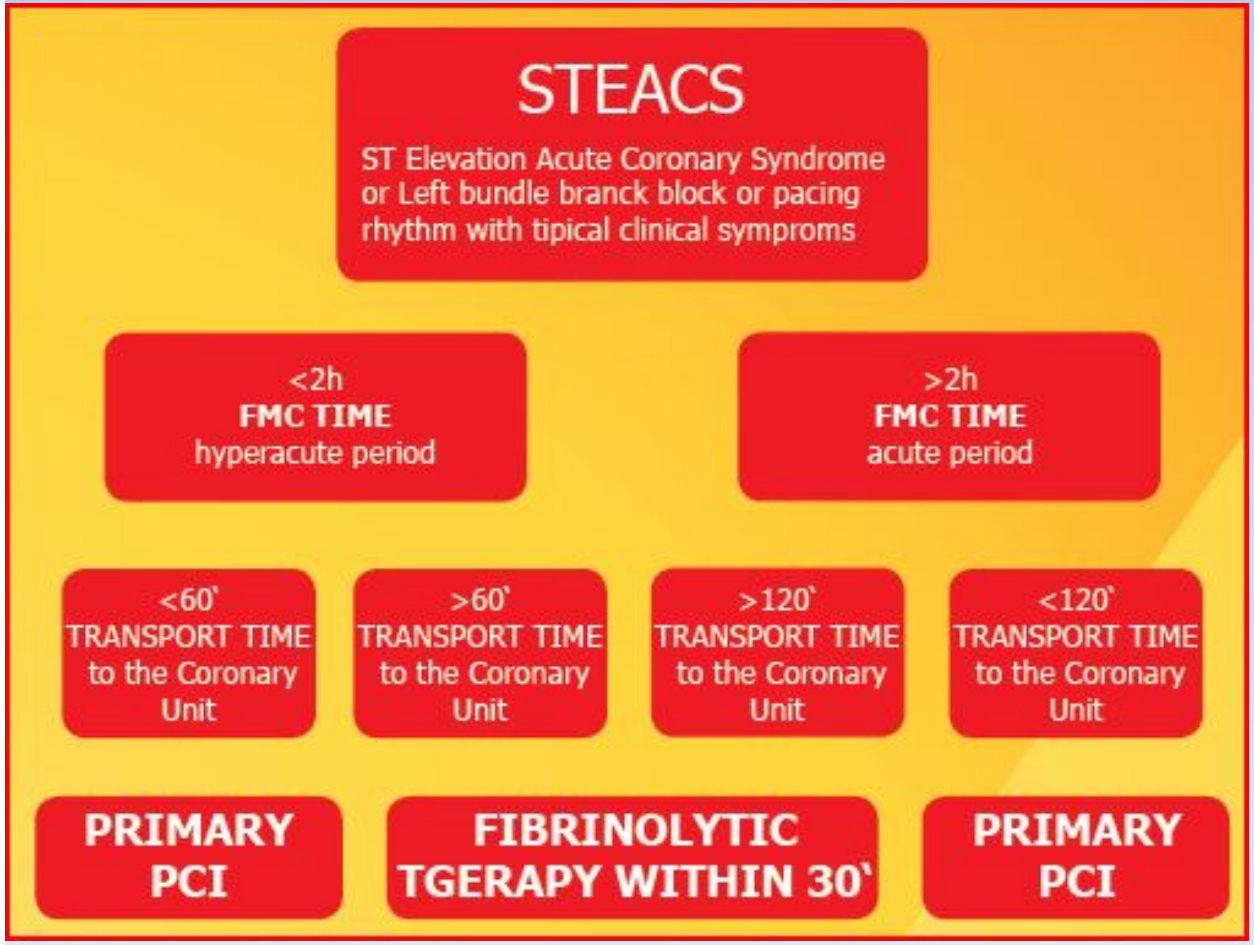
TRATTAMENTO IN PERIFERIA

NSTEACS

Non ST Elevation
Acute Coronary Syndrome

LOCAL HOSPITAL

patient history
clinical valutation
ECG
efficacy of the analgetic therapy
laboratory monitoring of troponin within 6 and 12 hours
monitoring of the ST segment
RISK score assessment
emorrhagic risk stratification
other exams



CORE MESSAGE DEL PROTOCOLLO

TERAPIA CONSIGLIATA

CONTRO-INDICAZIONI

CONTRAINDICATIONS of Fibrinoltytic Therapy

ABSOLUTE

- haemorrhagic stroke or stroke of unknown origin at any time
- ischaemic stroke in preceeding 6 month
- central nervous system trauma or neoplasm
- recent major trauma/surgery/ head injury (whitin preceeding 3 weeks)
- gastrintestinal bleeding within the last month
- known bleeding disorder
- aortic dissectionnon-compressible punctures (e.g. liver biopsy, lumbar puncture)

RELATIVE

- transient ischaemic attack in preceding 6 months
- oral anticoagulant therapy
- pregnancy or within 1 week post partum
- refractory hypertension (systolic blood pressure >180mmHg and/or diastolic blood pressure >110mmHg)
- advanced liver disease
- infective endocarditis
- active peptic ulcer
- refractory resuscitation

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FMC TIME INDIPENDENT DIRECT

emergency transport to the coronary Unit

- hemodynamically instable patient
- cardiogenic shock
- contraindicated fibrinolytic therapy
- patient conscious and with tipical symptoms
- persitent angina
- clinical signs of heart failure
- potentially lethal arrythmias (VT/VF)

CRITERI D'EMERGENZA ASSOLUTA

DRUGS

The call taker recommends to the patient to take **500mg of Aspirin orally** if she/he does not presents some contraindication:

stomach ulcus
allergy
coagulation disease
liver pathology

ANTITHROMBIN AND ANTIPLATELET CO THERAPY

With primary PCI:

Aspirin: oral dose of 500mg or i.v. dose of 500mg if oral ingestion is not possible
Clopidogrel: oral loading dose of at least 300mg, preferably 600mg
Heparin: i.v. bolus at a usual starting dose of 100U/kg weight.

With fibrinolytic therapy:

Aspirin: oral dose of 500mg or i.v. dose of 500mg if oral ingestion is not possible
Clopidogrel: oral loading dose of 300mg for patients < 75years of age; for patients >75years of age 75mg
Heparin: i.v. bolus of 60U/kg with a maximum of 4000U followed by an i.v. infusion of 12U/kg with a maximum of 1000U/h for 24-48h
Enoxiparin: In patients >75 years and creatinine levels 2.5mg/mL or 221mol/L (men) or 2mg/mL or 177mol/L (women): i.v. bolus of 30mg followed 15 min later by s.c. dose of 1mg/kg every 12h until hospital discharge for a maximum of 8 days.
The first two s.c. doses should not exceed 100mg.

In patients >75 years: no i.v. bolus; start with first s.c. dose of 0.75mg/kg with a maximum of 75mg for the first two s.c. doses.

In patients with creatinine clearance of <30mL/min, regardless of age, the s.c. doses are repeated every 24h.

Incoscient patient: no antithrombin and antiplatled co therapy

GRAZIE DELL‘ATTENZIONE