

Scantechnieken en hun toepassing

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(potentiële) belangenverstremgeling	Geen
Voor bijeenkomst mogelijk relevante relaties met bedrijven	Geen
<ul style="list-style-type: none">• Sponsoring of onderzoeksgeld• Honorarium of andere (financiële) vergoeding• Aandeelhouder• Andere relatie, namelijk ...	<ul style="list-style-type: none">•••

Niet invasieve beeldvorming bij
stabiele CAD

Niet invasieve beeldvorming bij stabiele CAD

- Myocardperfusiescintigrafie
- CT coronairen / calciumscore
- MRI cor

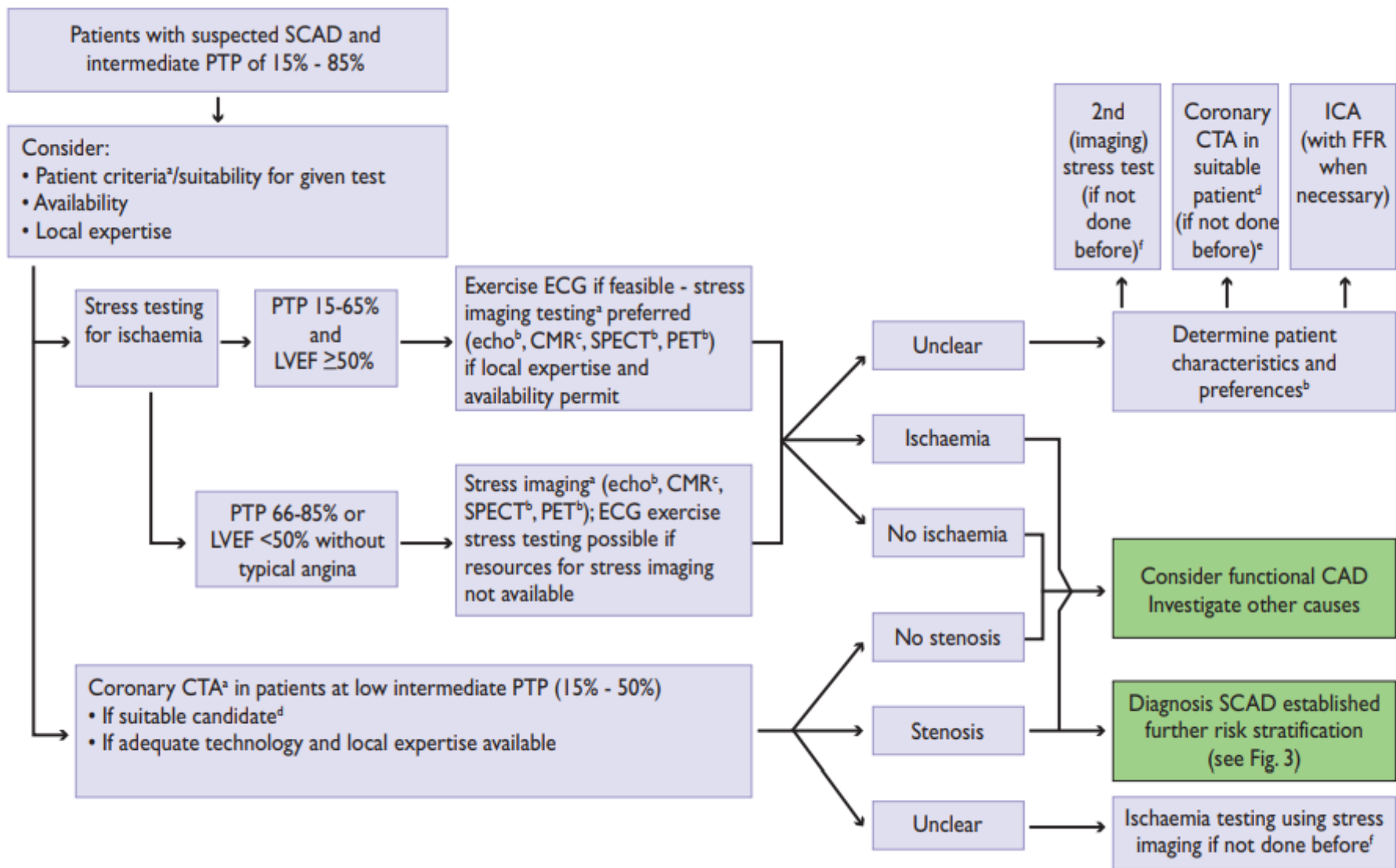
Table 13 Clinical pre-test probabilities^a in patients with stable chest pain symptoms¹⁰⁸

Age	Typical angina		Atypical angina		Non-anginal pain	
	Men	Women	Men	Women	Men	Women
30–39	59	28	29	10	18	5
40–49	69	37	38	14	25	8
50–59	77	47	49	20	34	12
60–69	84	58	59	28	44	17
70–79	89	68	69	37	54	24
>80	93	76	78	47	65	32

ECG = electrocardiogram; PTP = pre-test probability; SCAD = stable coronary artery disease.

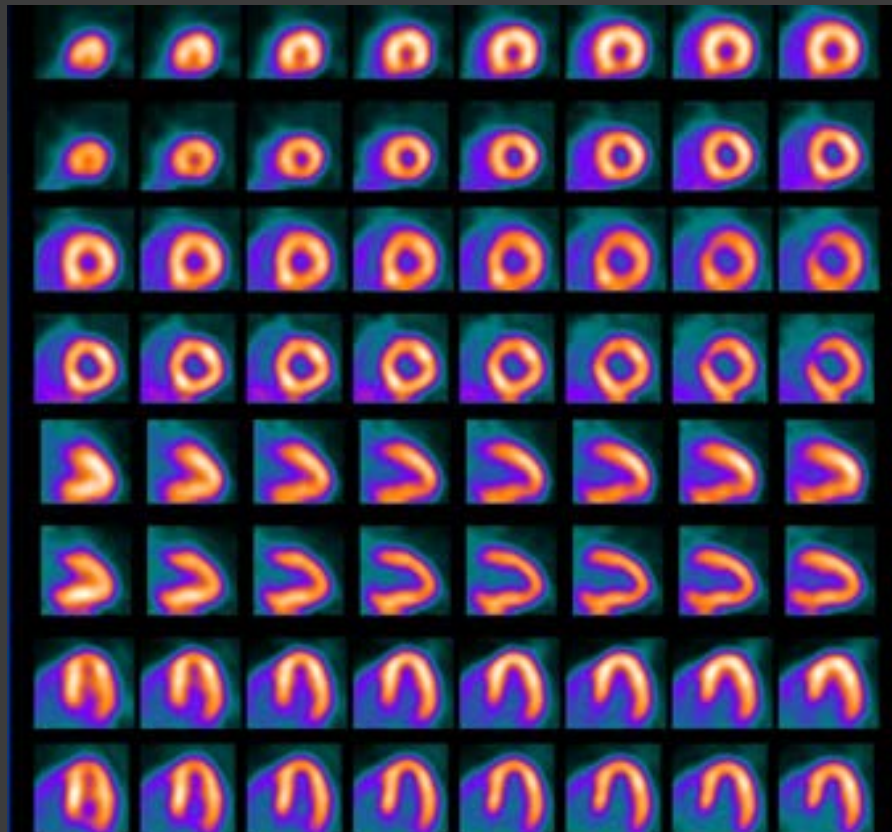
^a Probabilities of obstructive coronary disease shown reflect the estimates for patients aged 35, 45, 55, 65, 75 and 85 years.

- Groups in white boxes have a PTP < 15% and hence can be managed without further testing.
- Groups in blue boxes have a PTP of 15–65%. They could have an exercise ECG if feasible as the initial test. However, if local expertise and availability permit a non-invasive imaging based test for ischaemia this would be preferable given the superior diagnostic capabilities of such tests. In young patients radiation issues should be considered.
- Groups in light red boxes have PTPs between 66–85% and hence should have a non-invasive imaging functional test for making a diagnosis of SCAD.
- In groups in dark red boxes the PTP is >85% and one can assume that SCAD is present. They need risk stratification only.



Myocardperfusiescintigrafie

- Technetium 99m tetrofosmin / sestamibi



Principe Nucleaire Geneeskunde

Radionucleide + Tracer = Radiofarmacon



Zichtbaar op camera



Bindt aan een weefsel

Myocardperfusiescintigrafie

Vorbereiding

- Nuchter
- indien gewenst: beta-blokkers stoppen, bij voorkeur 48-72 uur tevoren
- 24 uur voor het stressonderzoek géén koffie, thee, bananen, noten, chocolade of cola gebruiken (bevatten cafeïne)
- Persantin 72 uur staken

Myocardperfusiescintigrafie

Uitvoering

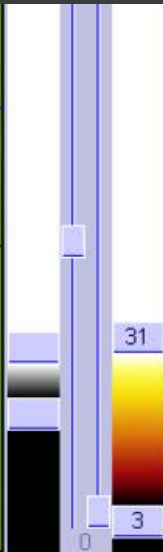
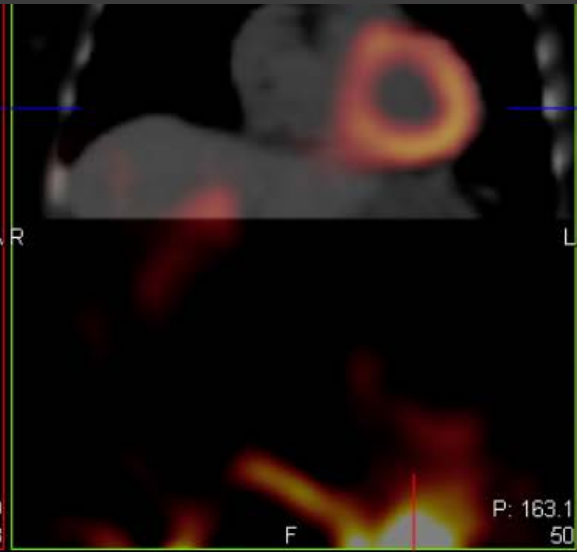
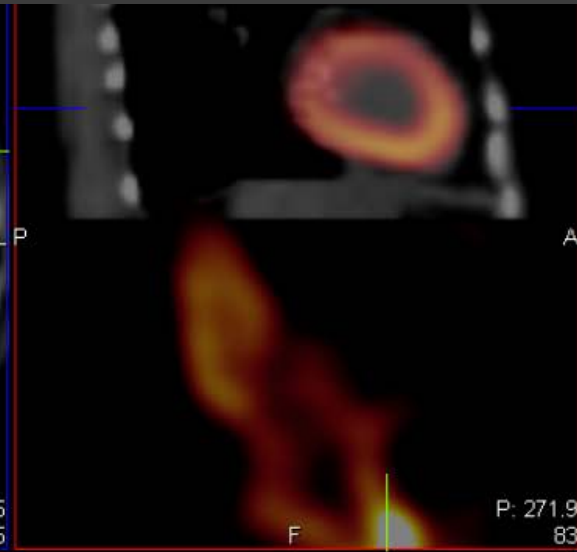
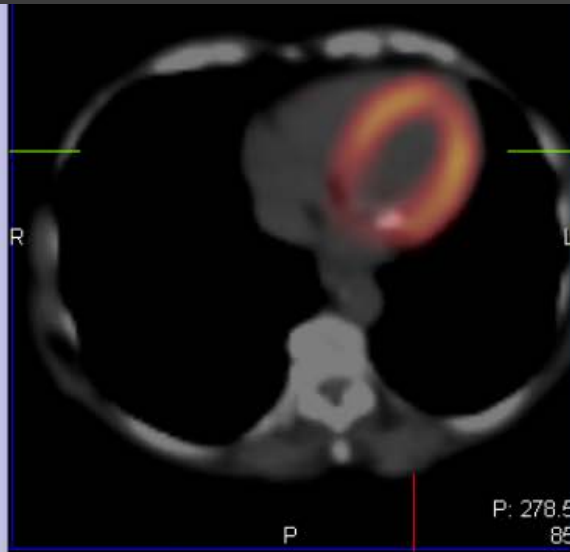
- Stressonderzoek voor uitlokken van ischemie
- Rustonderzoek ter vergelijking
- Twee-daags protocol: stress op eerste dag, rust op andere dag.

Myocardperfusiescintigrafie

Uitvoering - Stress

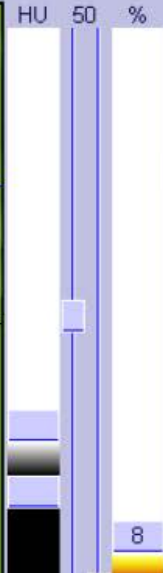
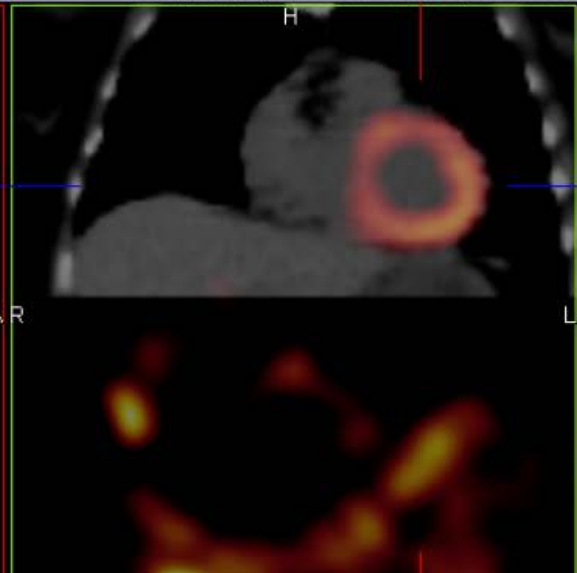
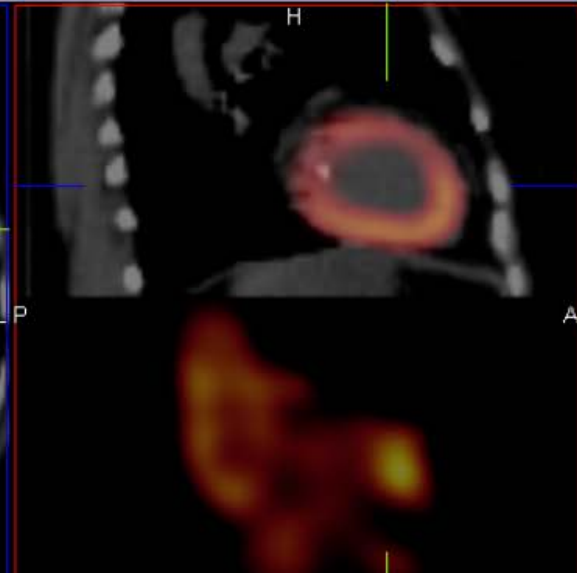
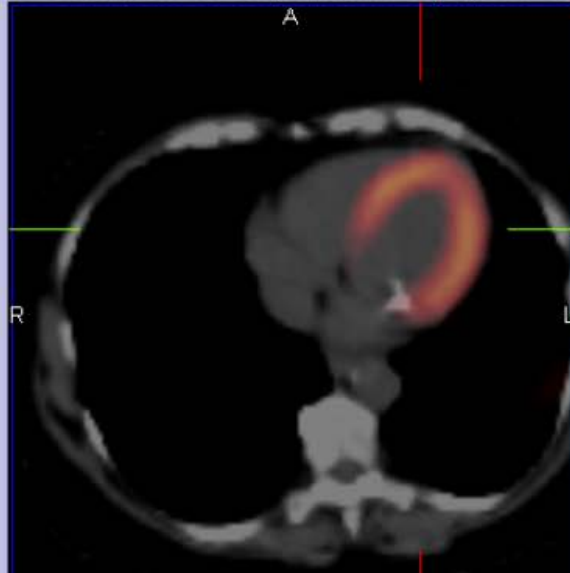
- Fietsergometrie (>85% max. hartfrequentie)
- Farmacologisch inspanning
 - Adenosine
 - Regadenoson
 - Dobutamine

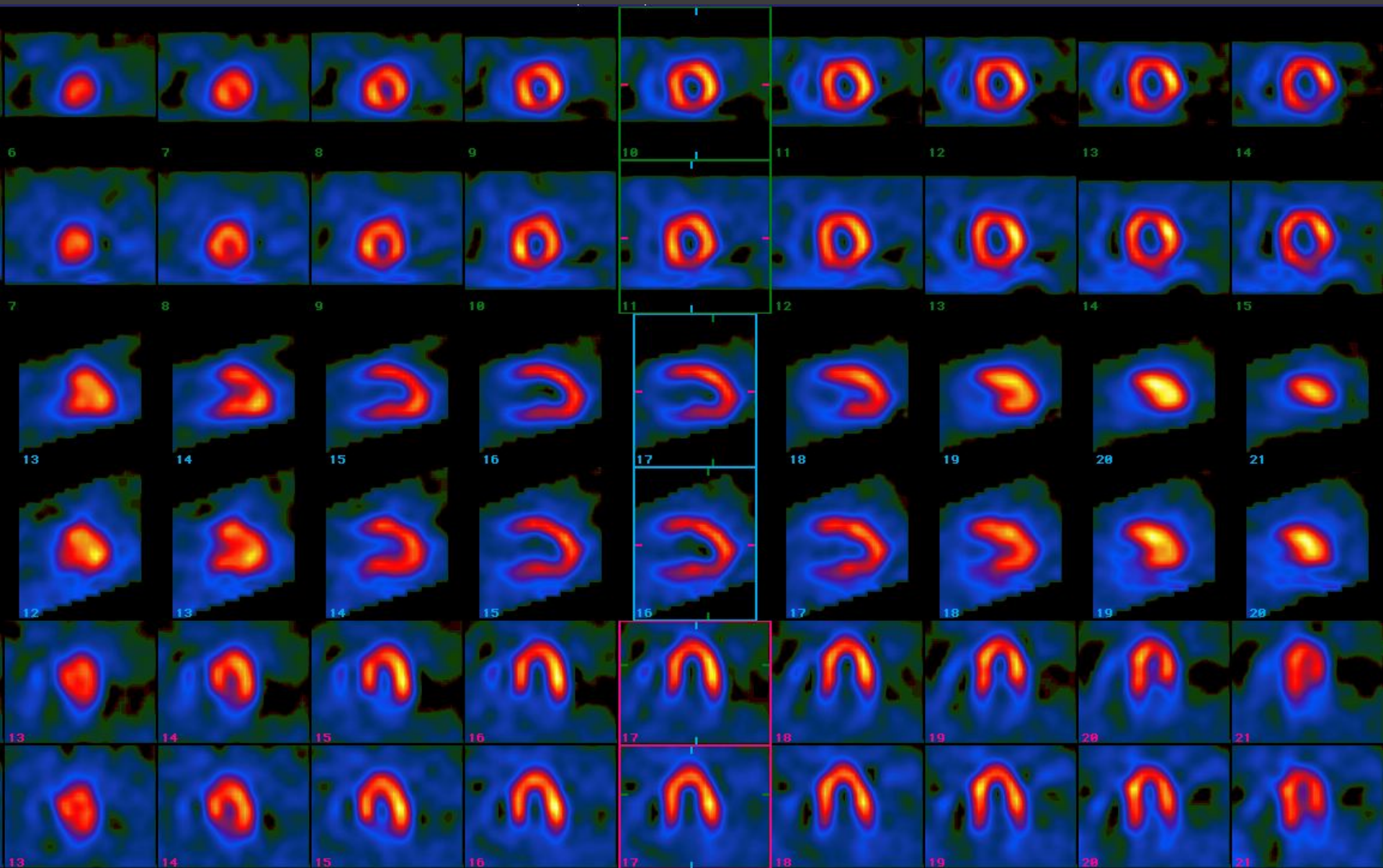




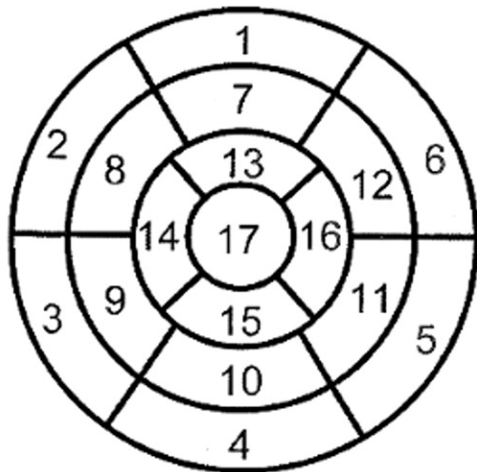
LD Cardiac_Rest 3/1.5 B35s [Transformed Object], 04-01-2012

Rest [Isotope (A) - Recon - Non AC], 04-01-2012





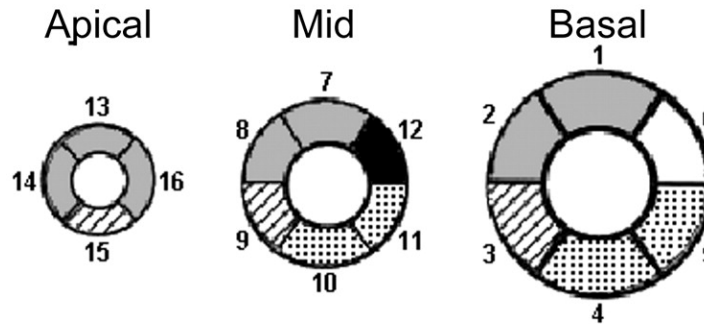
Circumferential plot polar map



- 1. Basal anterior
- 2. Basal anteroseptal
- 3. Basal inferoseptal
- 4. Basal inferior

- 5. Basal inferolateral
- 6. Basal anterolateral
- 7. Mid-anterior
- 8. Mid-anteroseptal

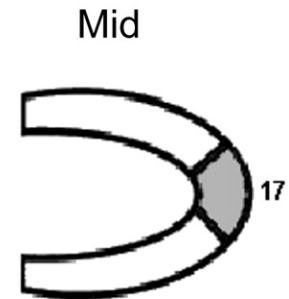
Short axis



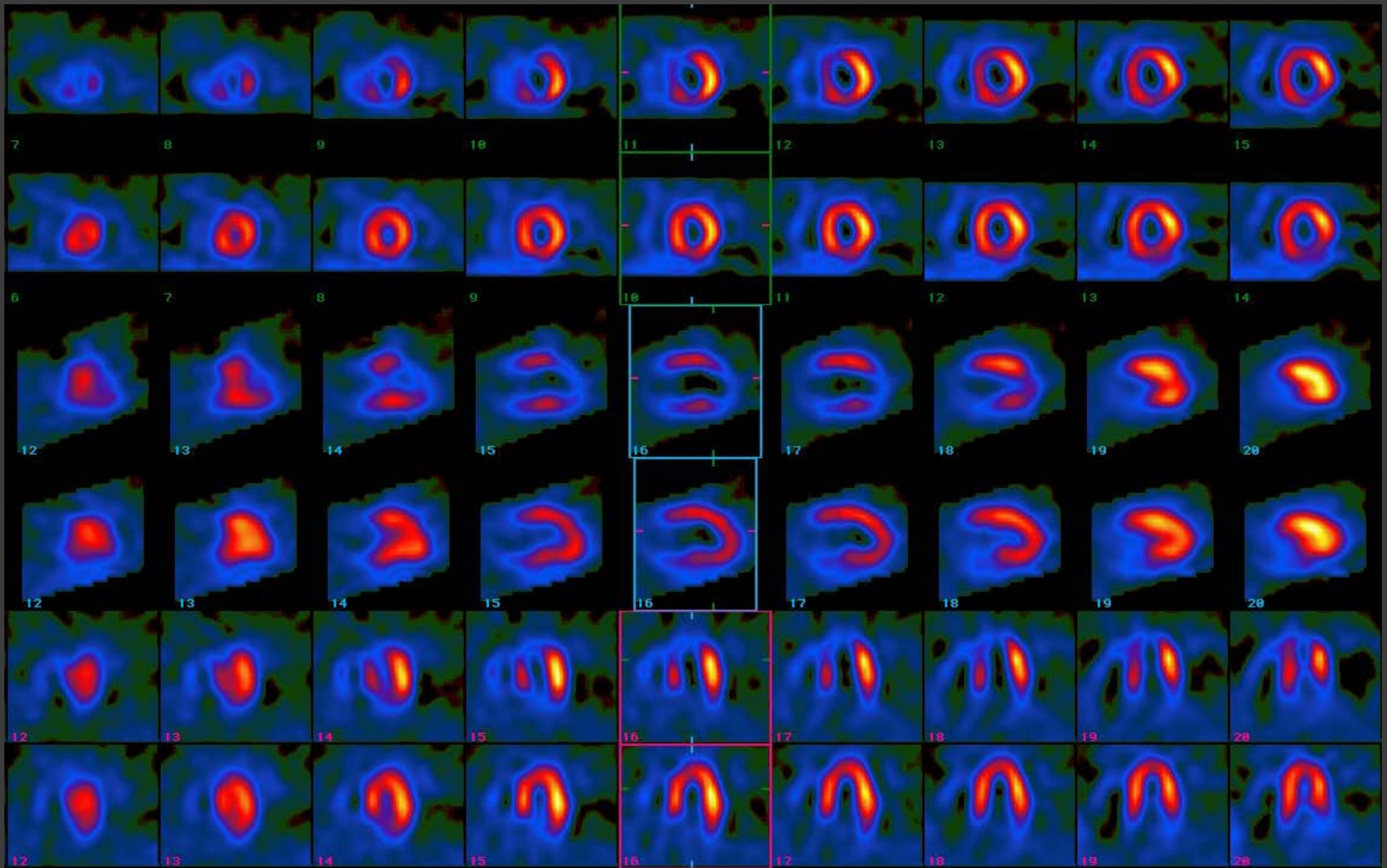
- 9. Mid-inferoseptal
- 10. Mid-inferior
- 11. Mid-inferolateral
- 12. Mid-anterolateral

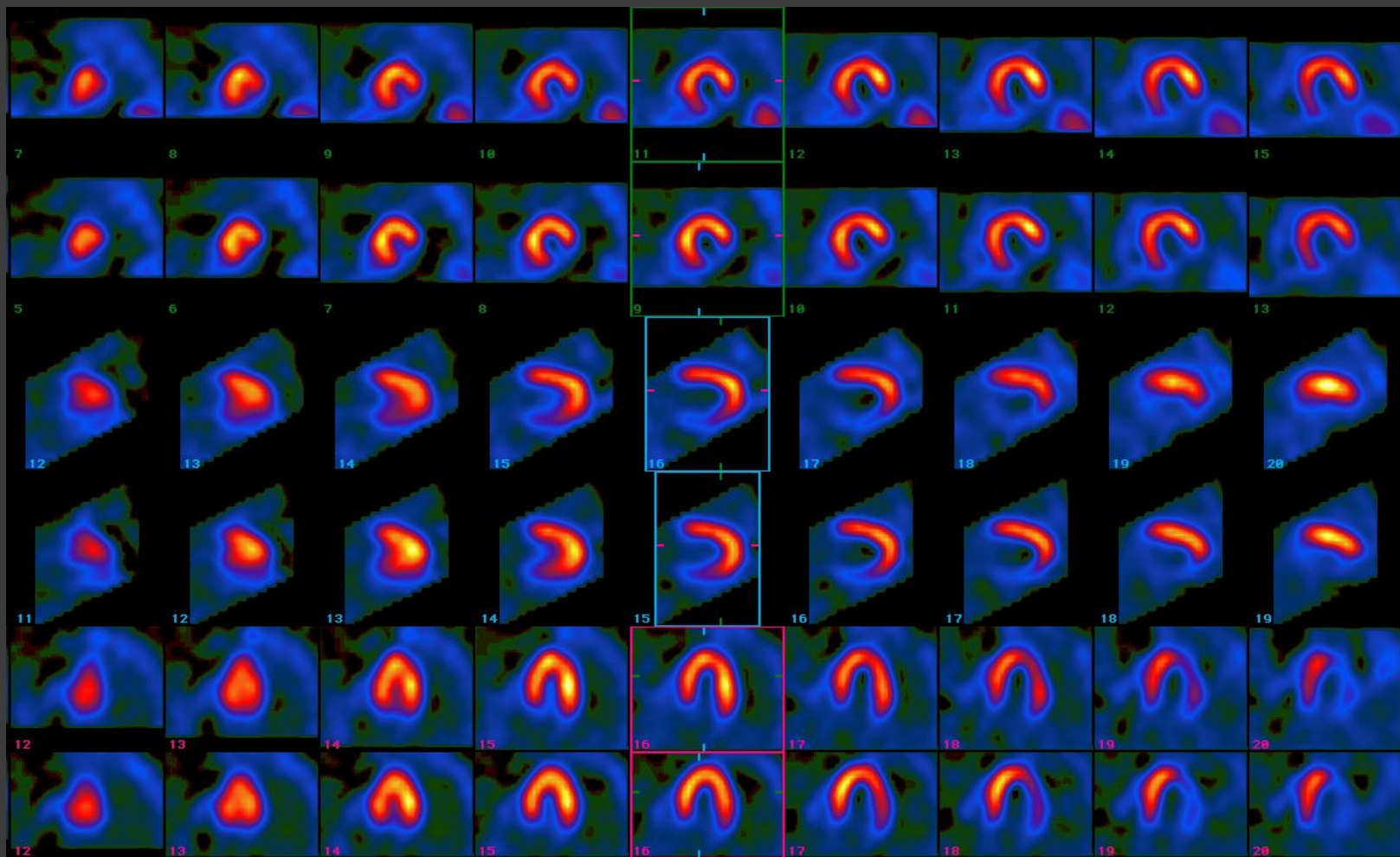
- 13. Apical anterior
- 14. Apical septal
- 15. Apical inferior
- 16. Apical lateral

Vertical long axis



- 17. Apex

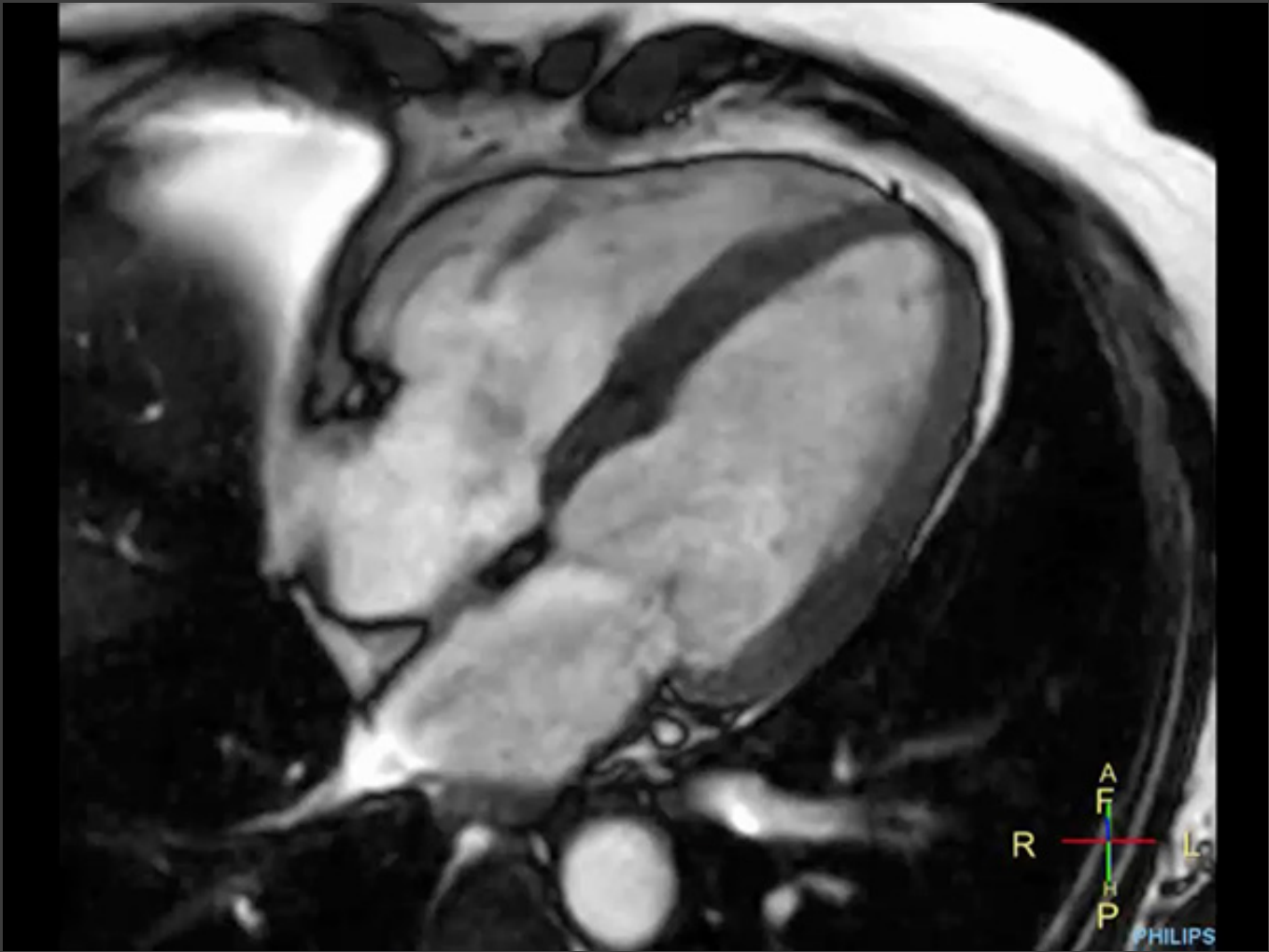




MRI cor

Verschillende toepassingen:

- LVEF
- Klepfunctie
- Viabiliteit / infarctgrootte
- Infectie / inflammatie
- Hypertrofie
- Ischemie

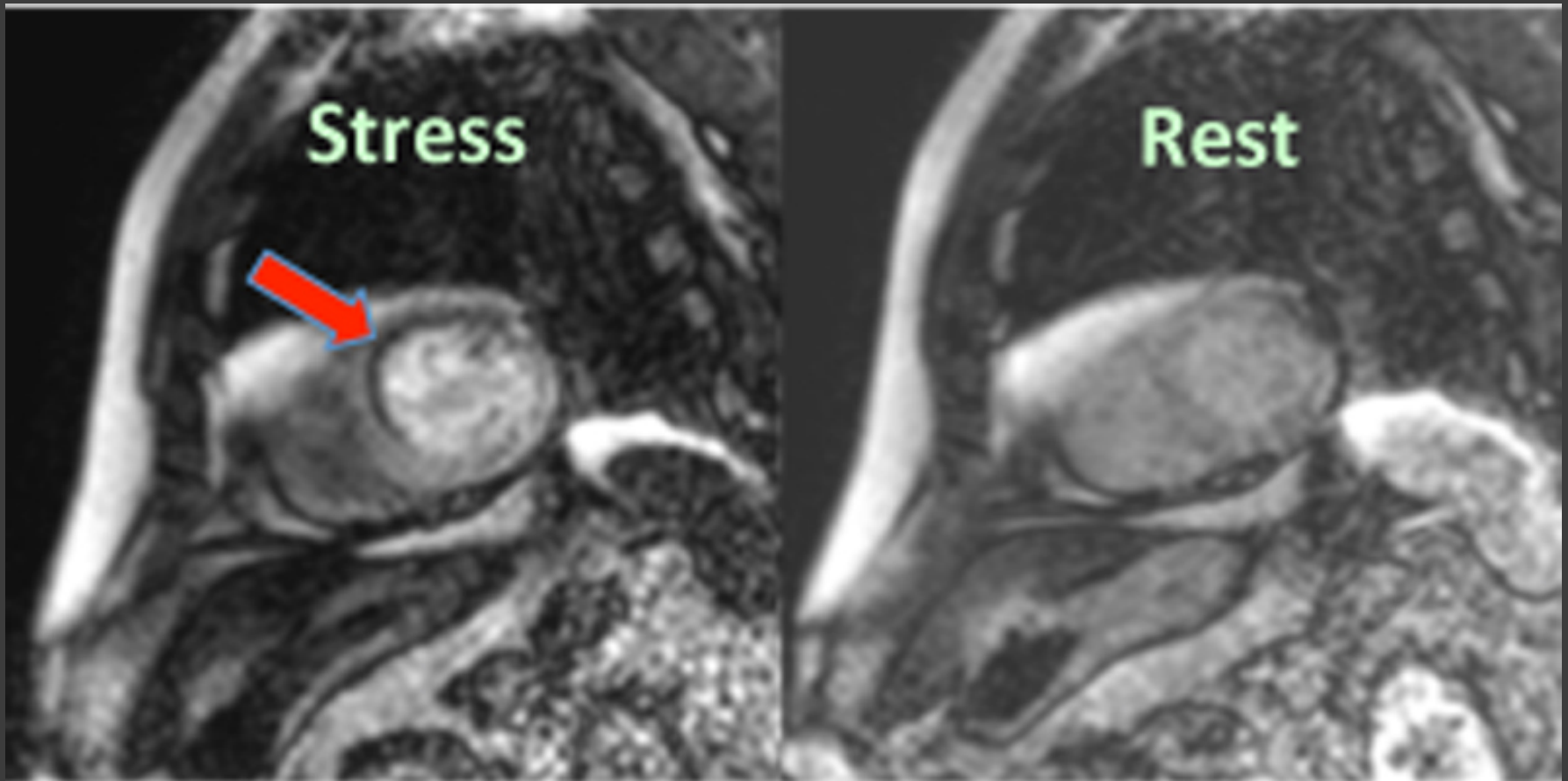


MRI ischemie

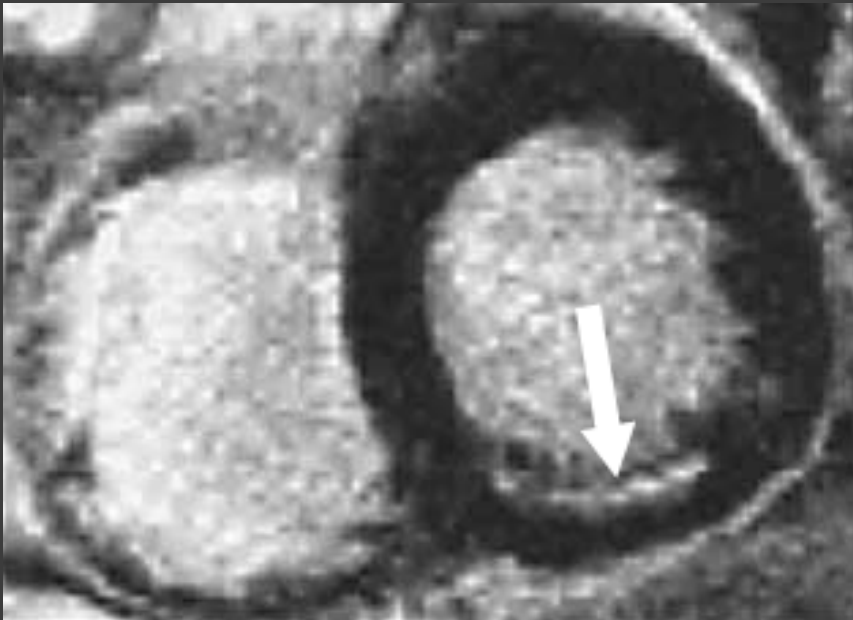
Uitvoering

- Toediening contrast
- Farmacologische inspanning
 - Adenosine
 - Regadenoson
- Nuchter, 24 uur geen cafeïne
- Opnamen in meer richtingen

MRI cor Ischemiedetectie



Viabiliteit - infarct



Calciumscore / CT coronairen

Principe

- Bij laag / intermediate risico patienten
- Lage hartfrequentie (<65 / min)

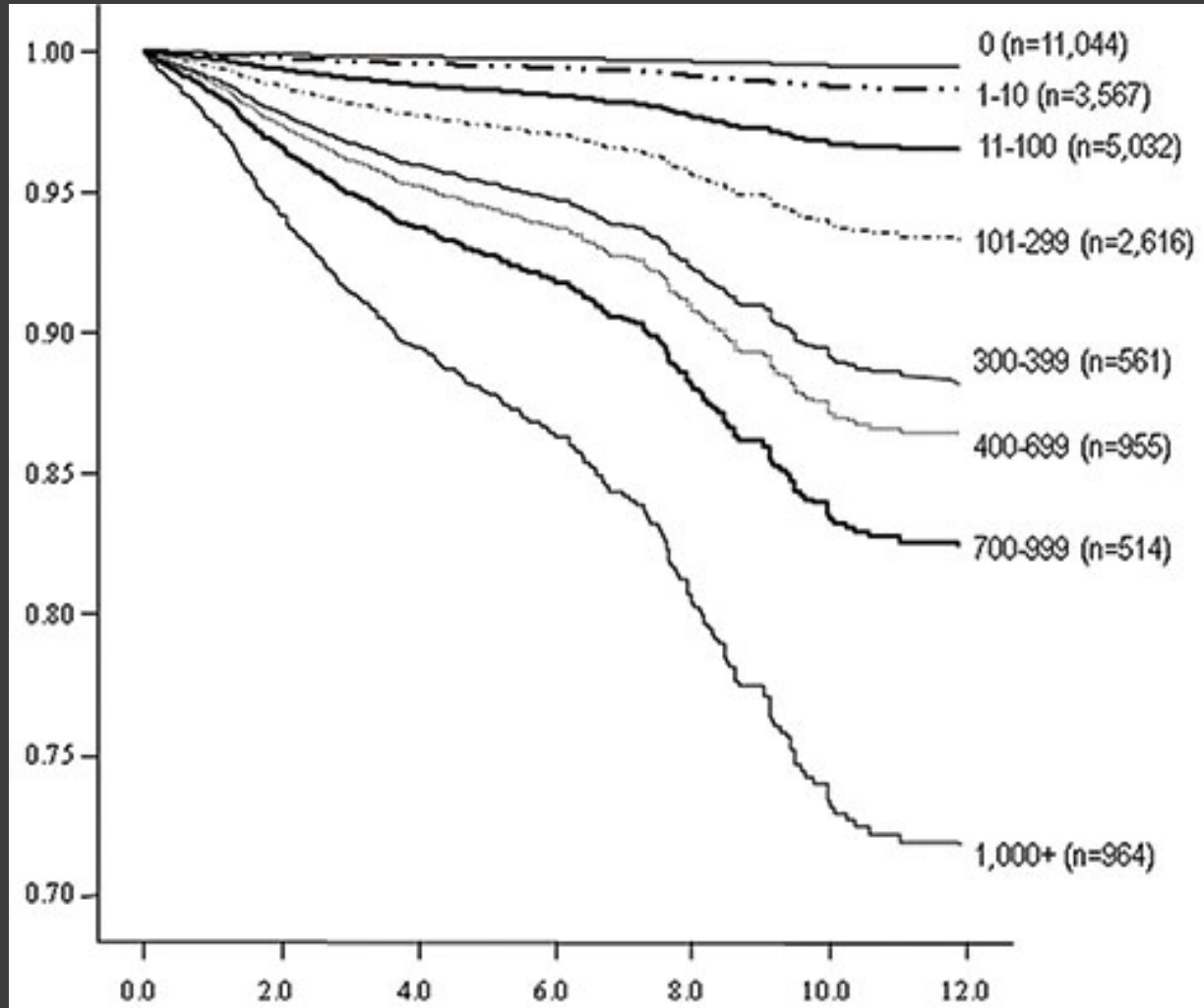
- Blanco CT van het hart
- Contrast om coronairen te beoordelen

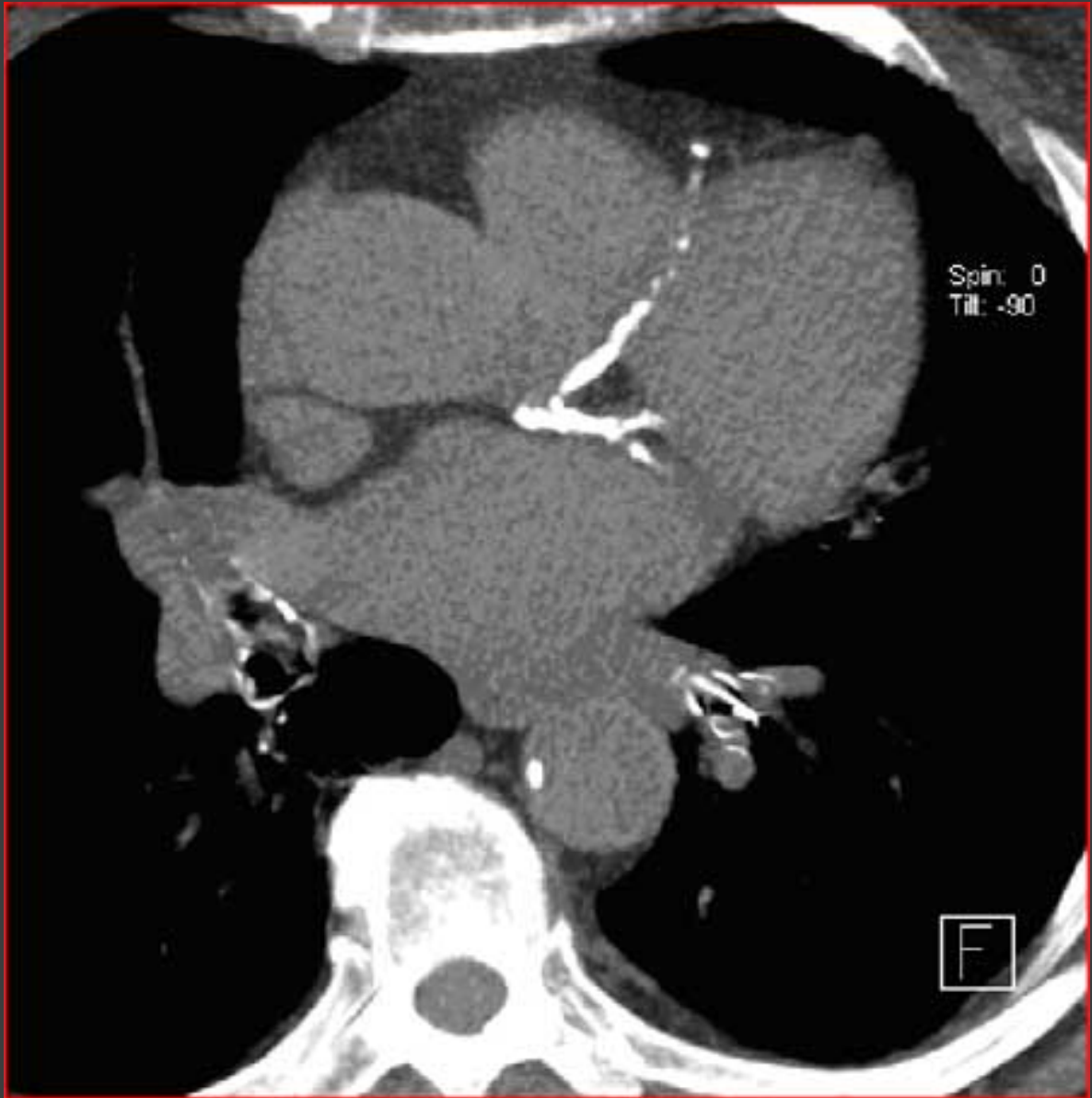
Vorbereiding:

- Nitroglycerine spray
- Betablokker

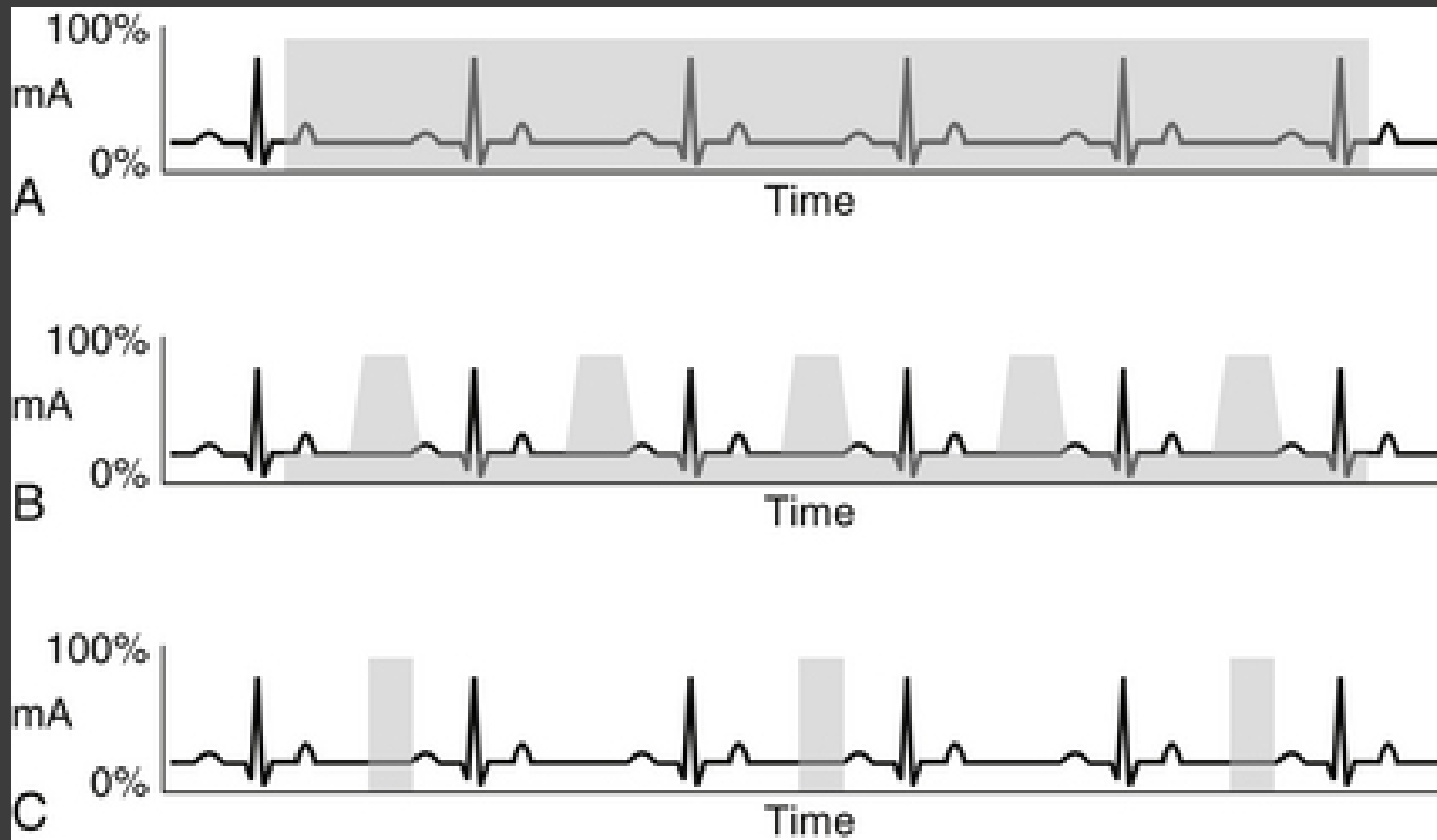
Calciumscore: Prognose

Calcium score 0? Veilig!

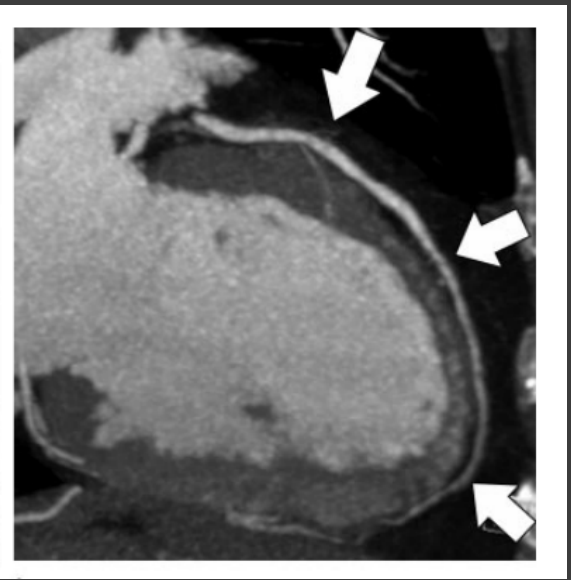
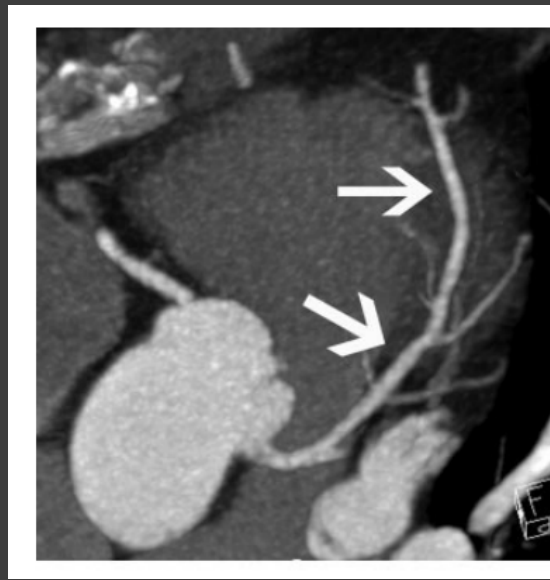
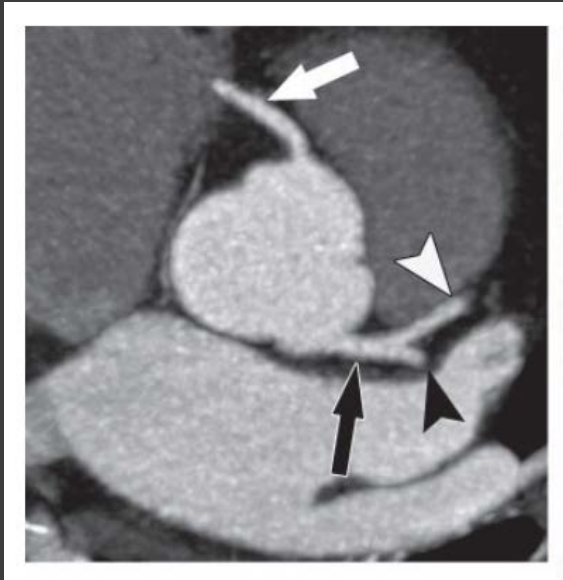


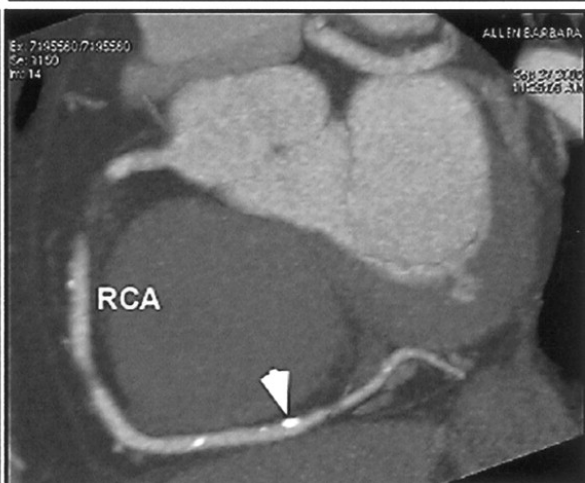
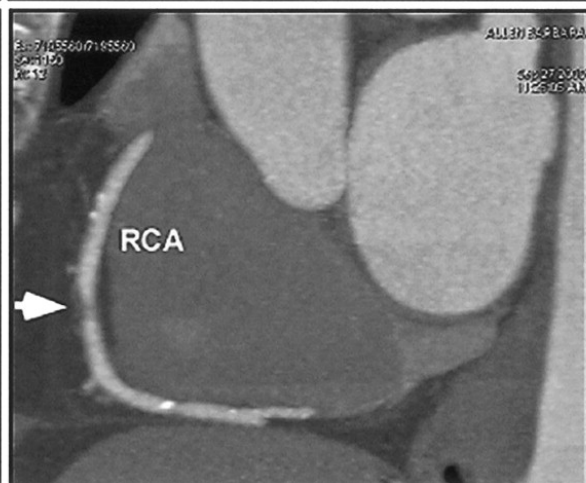
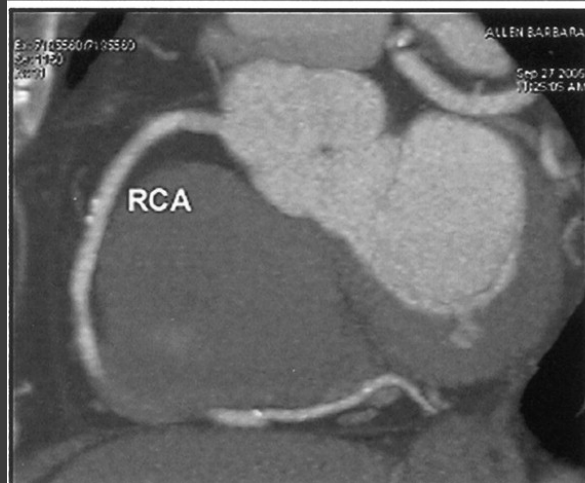
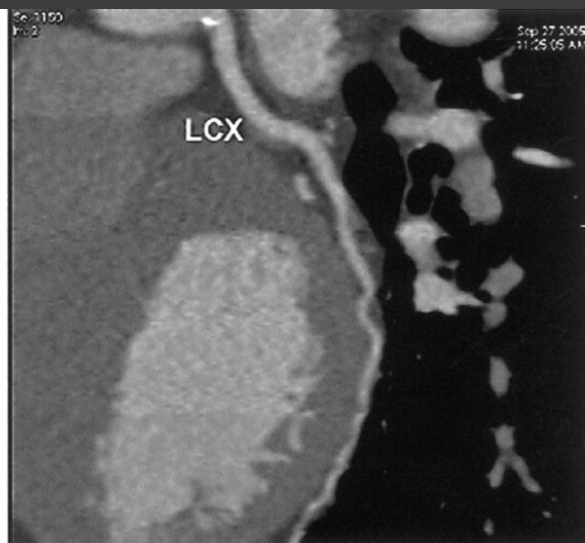


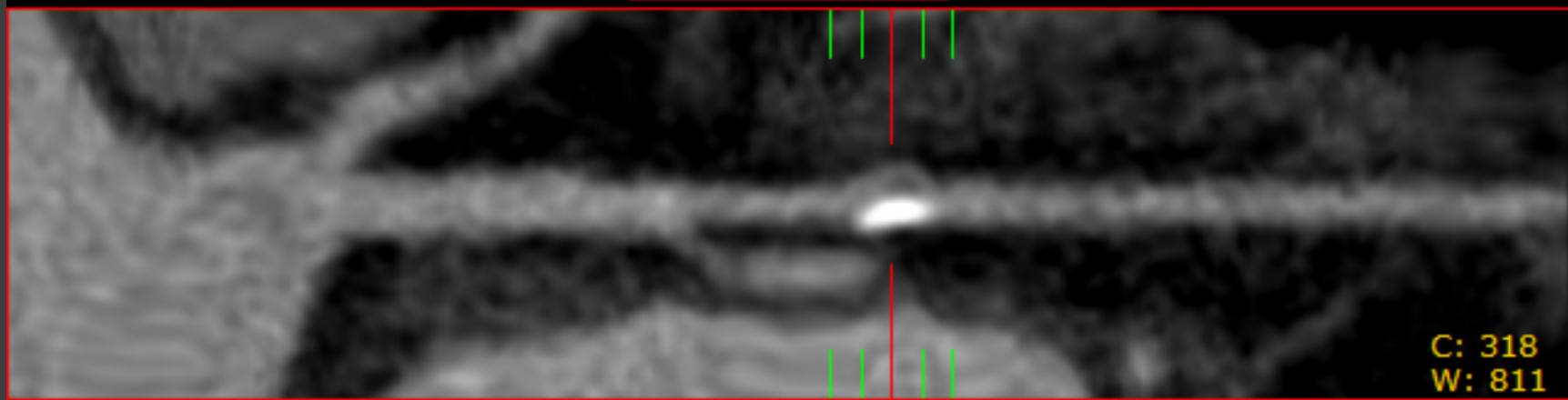
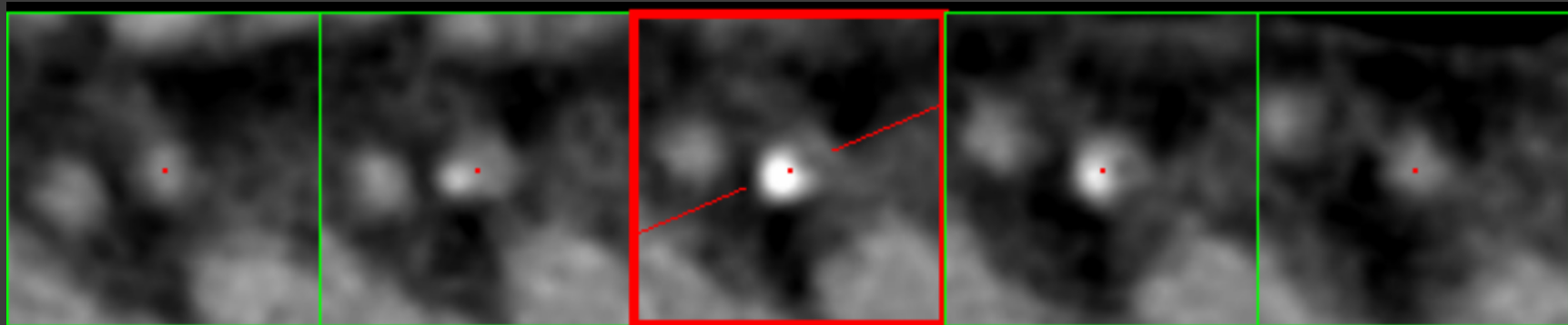
Wat CT techniek...

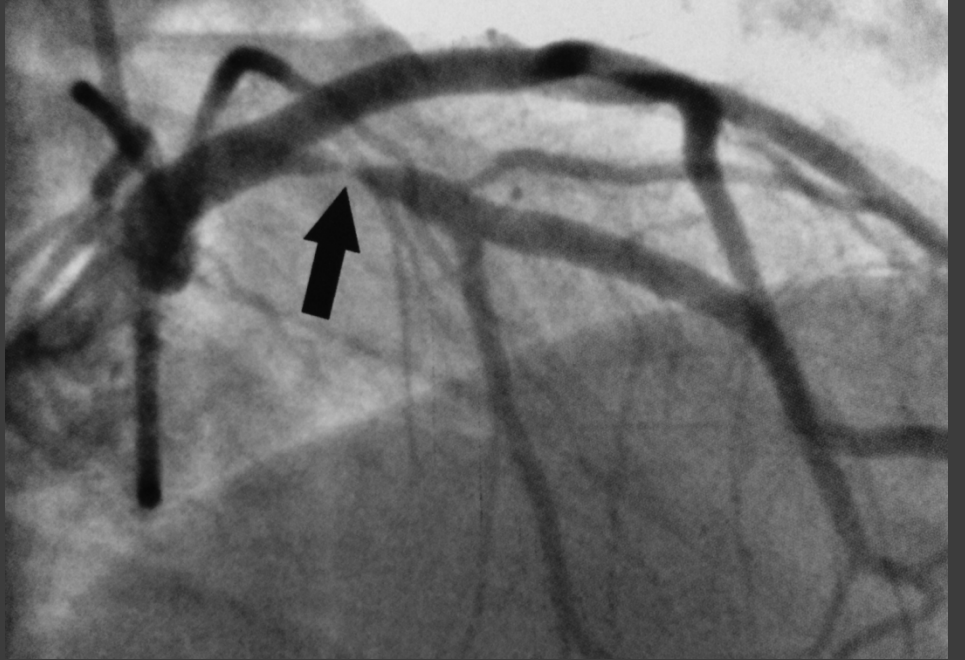
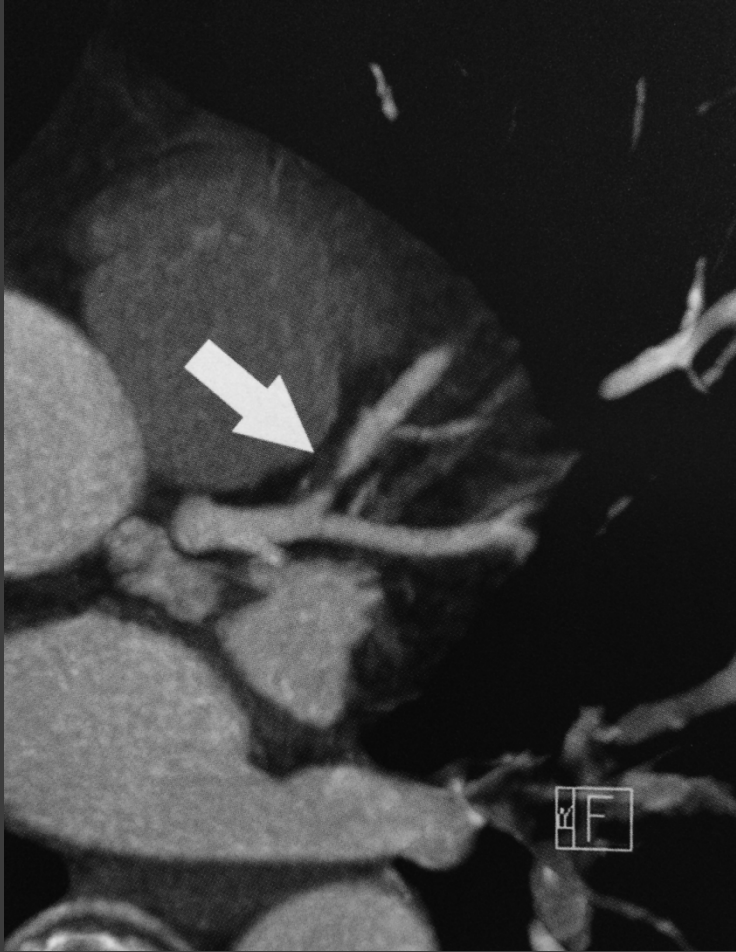


CT coronairen









Conclusie

- Verschillende modaliteiten voor ischemiedetectie in stabiele CAD
- Afhankelijke van risico inschatting vooraf
- Ischemiedetectie vs. Anatomie afwijkingen
- Calciumscore voor prognose