

Myocarditis in de context van COVID-19 en vaccinatie: Mythen en feiten

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Myocarditis Covid-19 & vaccinatie: mythen en feiten

- Vnl aandoening van jonge mannen ?
- Thoracale pijn + troponines - CAD = myocarditis ?
- Kans myocarditis na vaccinatie > opname ikv Covid ?
- Mag je sporten na Covid of vaccinatie?



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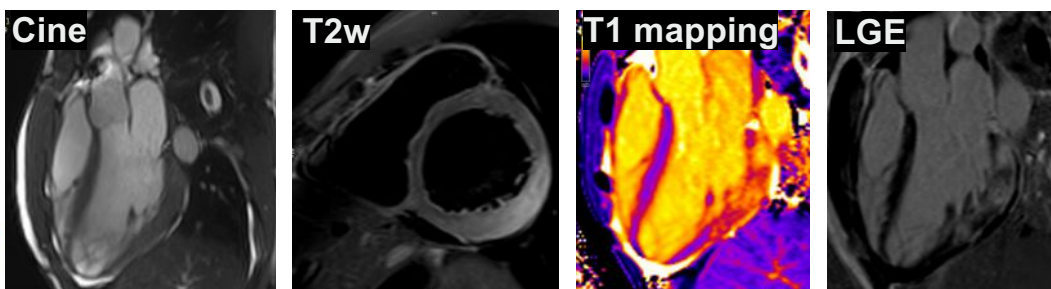
Myocarditis: inleiding

- Inflammatoire, niet ischemische hartziekte
- Etio: **viraal, auto-immuun, medicamenteus**
- Incidentie: **22 / 100 000 per jaar** (Global Burden of Disease Study 2013)
- Presentatie: **Viraal beeld + thoracale pijn <-> aritmie, shock**
- Oorzaak 5 à 10% plotse dood jongvolwassenen
- Directe schade <-> « molecular mimicry »

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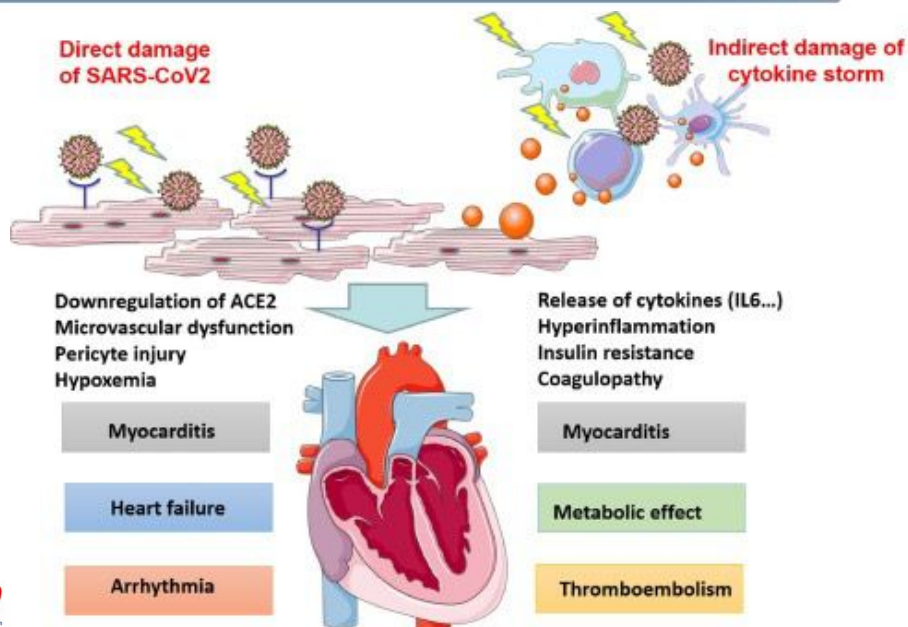
Myocarditis: diagnose

- Klinisch beeld: **viraal, stekende thoracale pijn**
- ECG: **abnormaal 85%** (meestal ST-stijging)
- Biopsie: **gouden standaard, maar invasief**
- Beeldvorming: **echocardiografie, cardiale MRI**



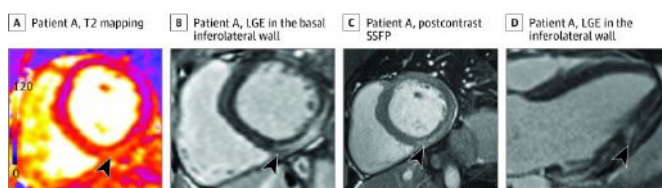
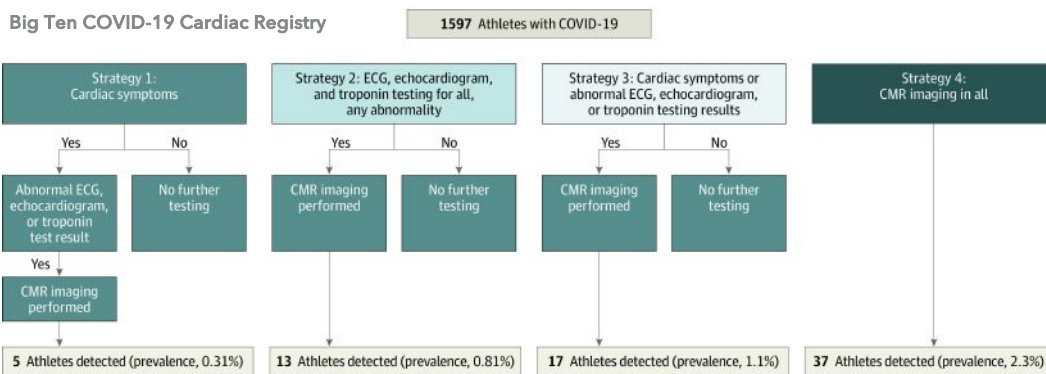
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Covid-19 & myocarditis: mechanisme



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Covid-19 & myocarditis: incidentie college athletes

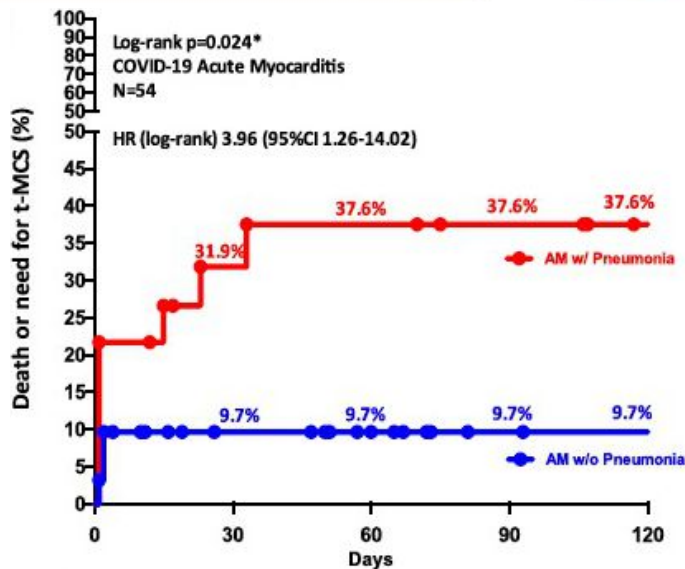
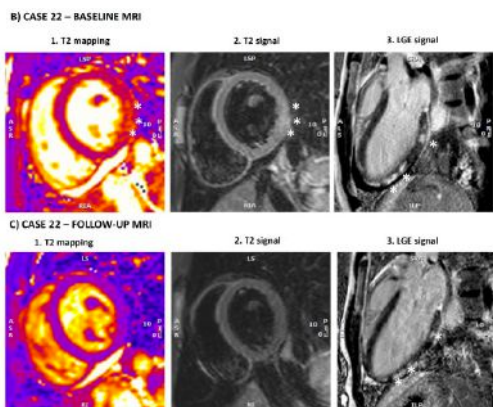


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Covid-19 & myocarditis: incidentie gehospitaliseerden

Hospitalized Patients with COVID-19 Infection in 23 hospitals in the US and Europe (N=56,963)

Patients with clinically suspected COVID-19 associated AM (N=112; 0.0197%)



Ammirati et al, Circulation 2022 (in press)



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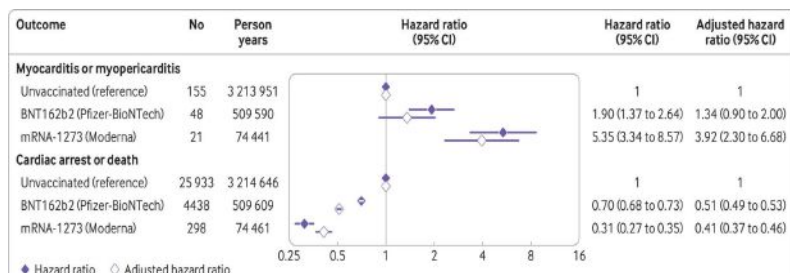
Covid-19 mRNA vaccinatie & myocarditis: incidentie

Table 1. Expected Versus Observed Number of Myocarditis/Pericarditis Cases in 7-Day Risk Window After Dose 2 of mRNA Covid-19 Vaccination*

| Age groups | Females | | | Males | | |
|------------|--------------------|-------------|-----------|--------------------|-------------|-----------|
| | Doses administered | Expected*,† | Observed* | Doses administered | Expected*,† | Observed* |
| 12–17 y | 2 189 726 | 0–2 | 19 | 2 039 871 | 0–4 | 128 |
| 18–24 y | 5 237 262 | 1–6 | 23 | 4 337 287 | 1–8 | 219 |
| 25–29 y | 4 151 975 | 0–5 | 7 | 3 625 574 | 1–7 | 59 |
| 30–39 y | 9 356 296 | 2–10 | 11 | 8 311 301 | 2–16 | 61 |
| 40–49 y | 9 927 773 | 2–19 | 18 | 8 577 766 | 2–16 | 34 |
| 50–64 y | 18 696 450 | 4–36 | 18 | 16 255 927 | 3–31 | 18 |
| 65+ y | 21 708 975 | 4–42 | 10 | 18 041 547 | 3–35 | 11 |

- 95% mannen
- 85% abnormaal ECG
- Meestal mild, resolutie zonder behandeling
- Meestal 1-5 dagen post-vax

Bozkurt et al, Circulation 2021

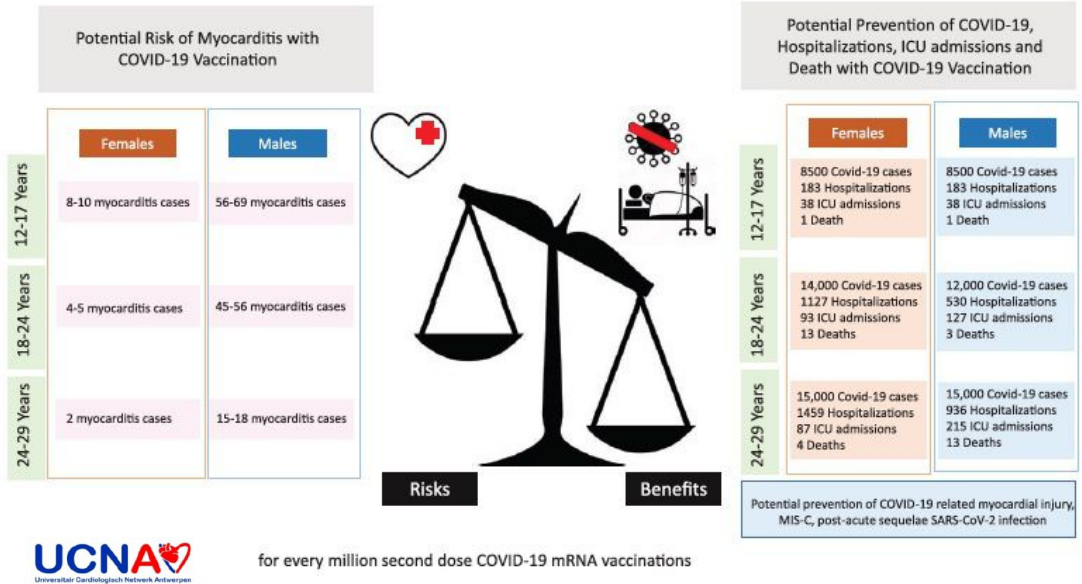


Husby et al, BMJ 2021



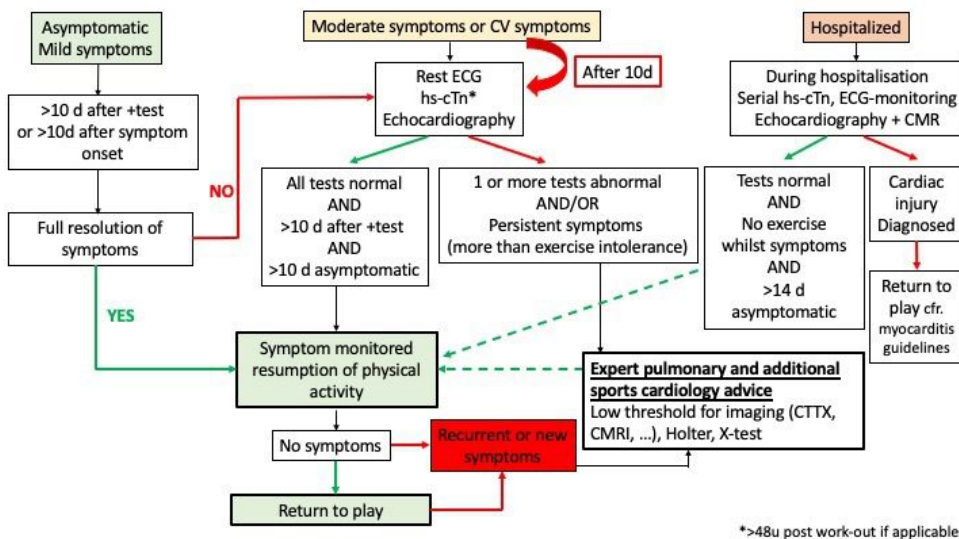
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Covid-19 mRNA vaccinatie & myocarditis: risks vs benefits



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Wat met sport na Covid en vaccinatie?



VACCINATIE

Pas gevaccineerd?

Hou 48 uur rust.
Doe gedurende 3 dagen
na die rust geen
wedstrijden of zware
inspanningen.

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Wat met sport na myocarditis?

Recommendations for exercise in individuals with myocarditis

| Recommendations | Class ^a | Level ^b |
|---|--------------------|--------------------|
| Comprehensive evaluation, using imaging studies, exercise stress test and Holter monitoring, is recommended following recovery from acute myocarditis to assess the risk of exercise-related SCD. ^{455,462,463} | I | B |
| Return to all forms of exercise including competitive sports should be considered after 3–6 months in asymptomatic individuals, with normal troponin and biomarkers of inflammation, normal LV systolic function on echocardiography and CMR, no evidence of ongoing inflammation or myocardial fibrosis on CMR, good functional capacity, and absence of frequent and/or complex VAs on ambulatory Holter monitoring or exercise testing. ^{430,434,453,459,460,464} | IIa | C |

| | | |
|---|-----|---|
| Among individuals with a probable or definitive diagnosis of recent myocarditis, participation in leisure-time or competitive sports while <u>active inflammation is present</u> is not recommended. ^{459,460} | III | C |
| Participation in moderate- to high-intensity exercise for a period of <u>3–6 months</u> after acute myocarditis is not recommended. ^{459–461,467} | III | B |
| Participation in leisure exercise or competitive sports involving high intensity in individuals with <u>residual myocardial scar and persistent LV dysfunction</u> is not recommended. | III | C |

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→ **Patienten met residuele fibrose : patiënt specifieke aanpak** UZA

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Myocarditis Covid-19 & vaccinatie: mythen en feiten

- Vnl aandoening van jonge mannen ?  **FACT**
- Thoracale pijn + troponines - CAD = myocarditis ?
→ myocarditis eerder zeldzame vorm "myocardial injury" in Covid-19
- Kans myocarditis na vaccinatie > opname ikv Covid ?  **MYTH**
- Mag je sporten na Covid of vaccinatie?
→ Geen zware inspanningen gedurende resp 10 en 5 dagen ; evaluatie ifv symptomen