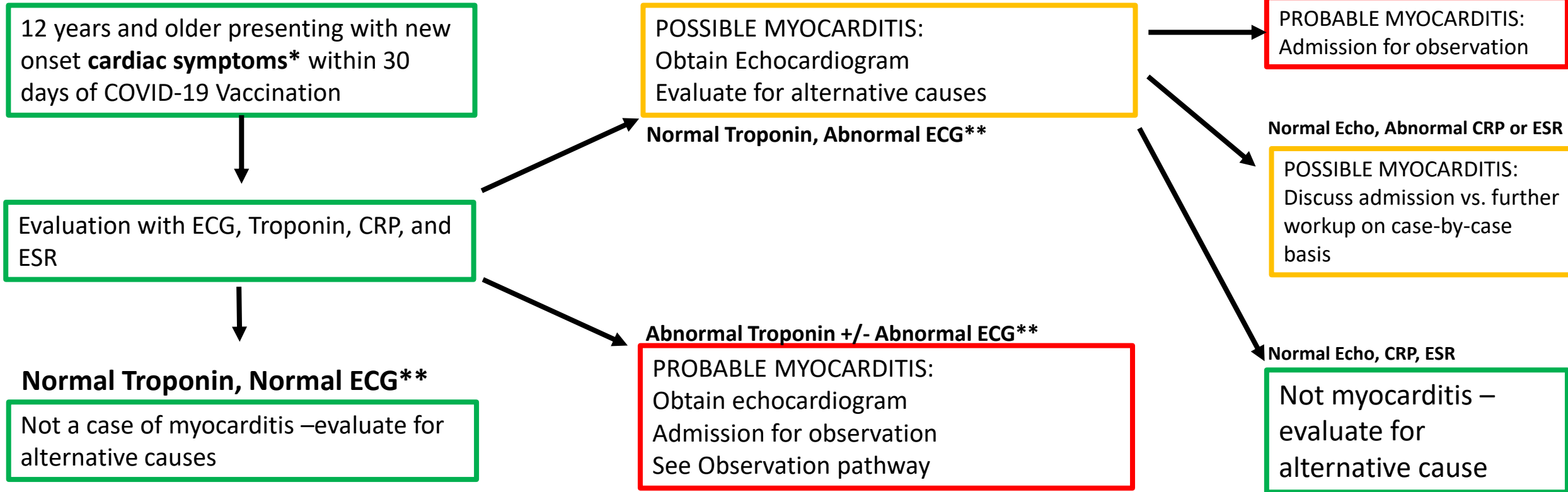




Phoenix Children's Hospital Cardiology

Post COVID-19 Vaccine Myocarditis clinical guideline - Diagnosis



*Cardiac Symptoms

Chest pain or pressure
Palpitations
Dyspnea w exercise or laying supine
Aborted Sudden death

**Abnormal ECG

ST-T wave abnormalities
Atrial or ventricular arrhythmias
AV nodal conduction delays
Frequent atrial or ventricular ectopy

***Abnormal Echo

Focal or diffuse decrease in LV/RV function (Systolic or diastolic)
Segmental wall motion abnormalities
Ventricular dilation or wall thickness change
Intracavitary Thrombi
Pericardial effusion



Phoenix Children's Hospital Cardiology

Post COVID-19 Vaccine Myocarditis clinical guideline - Admission

Routine Admission to 5East (Cardiology Service) for Telemetry and observation.

Routine workup/management

Trend Troponin q8 (until downtrend)
Q day ECG
Telemetry
CBC-d, CMP, pro-BNP, COVID-19 eval on admission (if not done in ED)
Can repeat echo prior to DC if initially abnormal (effusion, dec function)

Treatment:

Chest pain – Ibuprofen
LV dysfunction, arrhythmia – consider IVIG, steroids in addition to medical Therapy

DC criteria:

Downtrending Troponin, appropriate pain control, no concerning arrhythmia on telemetry, stable echo findings (if any abnl)

Follow-up – With Comprehensive Coronary Care Clinic (C4) in 1 month, exercise restrict x 3 months

Consider CVICU admission for:
Moderate or worse LV dysfunction
Malignant arrhythmia
Presentation with Sudden Death
CHF symptoms or abnormal vital signs requiring inotropes or positive pressure ventilation

CVICU/critically ill workup management
Trend troponin q6
Qday ECG
Viral myocarditis panel/evaluation
COVID-19 evaluation
Consider cMRI

Supportive cares/inotropes
Consider IVIG/Steroids/Anakinra

Follow-up
Within 2 weeks of discharge with C4 +/- Ep/Heart failure team
Exercise restriction x 6 months

References:

- <https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/>
- Brighton collaboration definitions: <https://brightoncollaboration.us/myocarditis-case-definition-update/>
- <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/covid-19.html>
- Circulation. 2021 Aug 10;144(6):471-484.
- MMWR Morb Mortal Wkly Rep. 2021 Jul 9;70(27):977-982.
- Symptomatic Acute Myocarditis in Seven Adolescents Following Pfizer-BioNTech COVID-19 Vaccination. Pediatrics. 2021 (epub ahead of print)

Level of evidence for these guidelines: expert opinion

Guidelines developed by C4 team: A. Sabati, T Nowlen, S Pophal