

Endocarditis Echocardiography Algorithm

Clinical Suspicion for Endocarditis Based on Duke-Li Criteria and Clinical Risks for IE:
Community-acquired or prolonged bacteremia, embolic episodes, previous IE or IVDU

TTE

- Multiple zoomed-in views of each valve,
- Two-dimensional sweeps of valves,
- Nontraditional windows to probe abnormal findings
- Use of fundamental frequencies to enhance spatial resolution beyond that of harmonic imaging alone.

Prosthetic Valve
CIED, MCS Device
Complex CHD
Cardiac Transplant
↑ Risk

Diagnostic for
Endocarditis
+ ? Complex Feature

Non-diagnostic
TTE and + Clinical
Risks for IE

"Negative" TTE for Endocarditis



L sided IE to define, confirm or **exclude Complex Feature:**

- Severe or Worsening Regurgitation
- Vegetation > 5 mm
- Abscess
- Pseudoaneurysm
- Perforation
- Fistula
- Valve aneurysm
- Dehiscence
- Esp with Staph, Enterococcus, Fungal

Strict negative Duke criteria on TTE:

- ≥ Moderate quality study
- Normal 4 valve anatomy with no BAV, MVP, MAC, ASD or VSD (± repair)
- No valve sclerosis or stenosis
- Minimal regurgitation
- < small non-loculated pericardial effusion
- No prosthetic material or central line
- No evidence for vegetation

NO

YES

Re-assess Clinical Suspicion for Endocarditis

LOW: Not community-acquired or prolonged
bacteremia, embolic episodes, previous IE or IVDU

YES

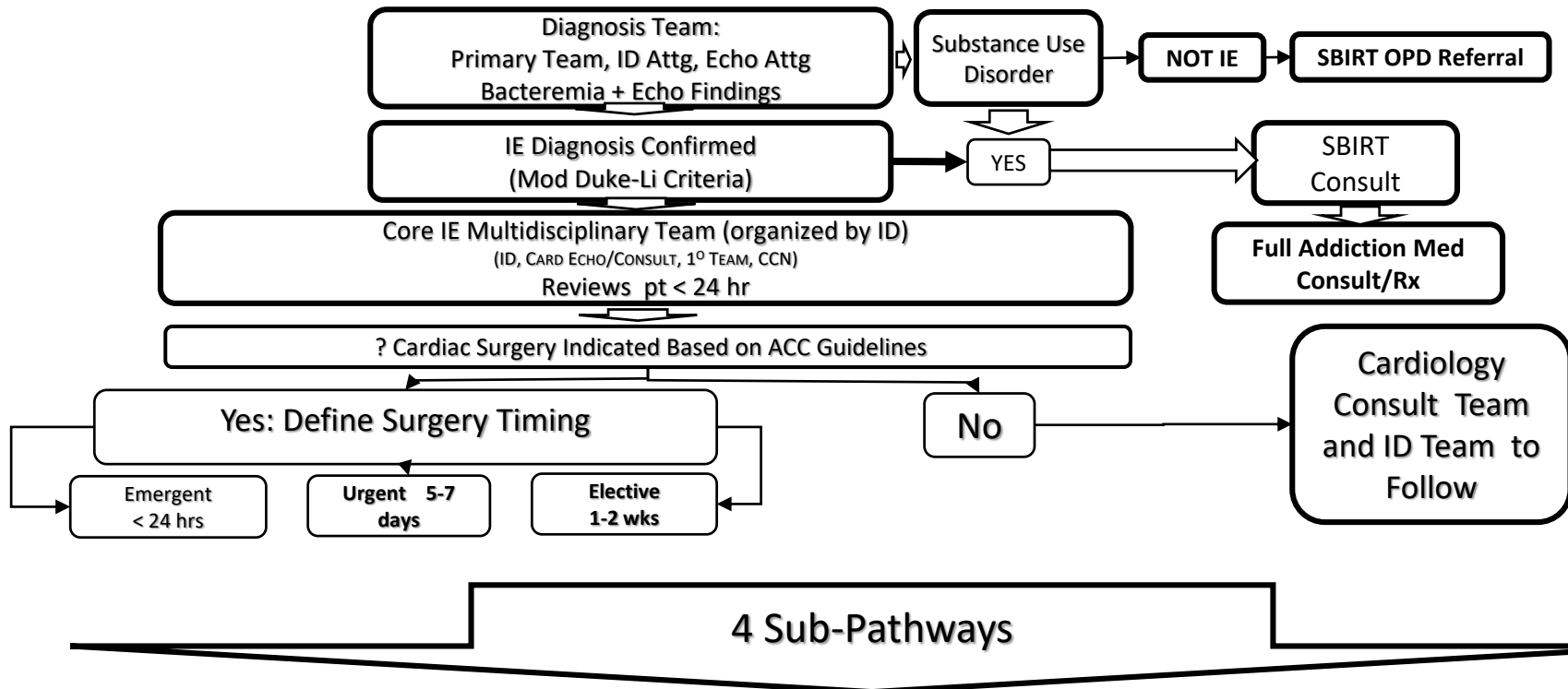
STOP

TEE

If initial TEE is negative, but IE suspicion remains high, repeat TTE or TEE in 5-7 days; if prosthetic valve, consider PET-CT or cMRI

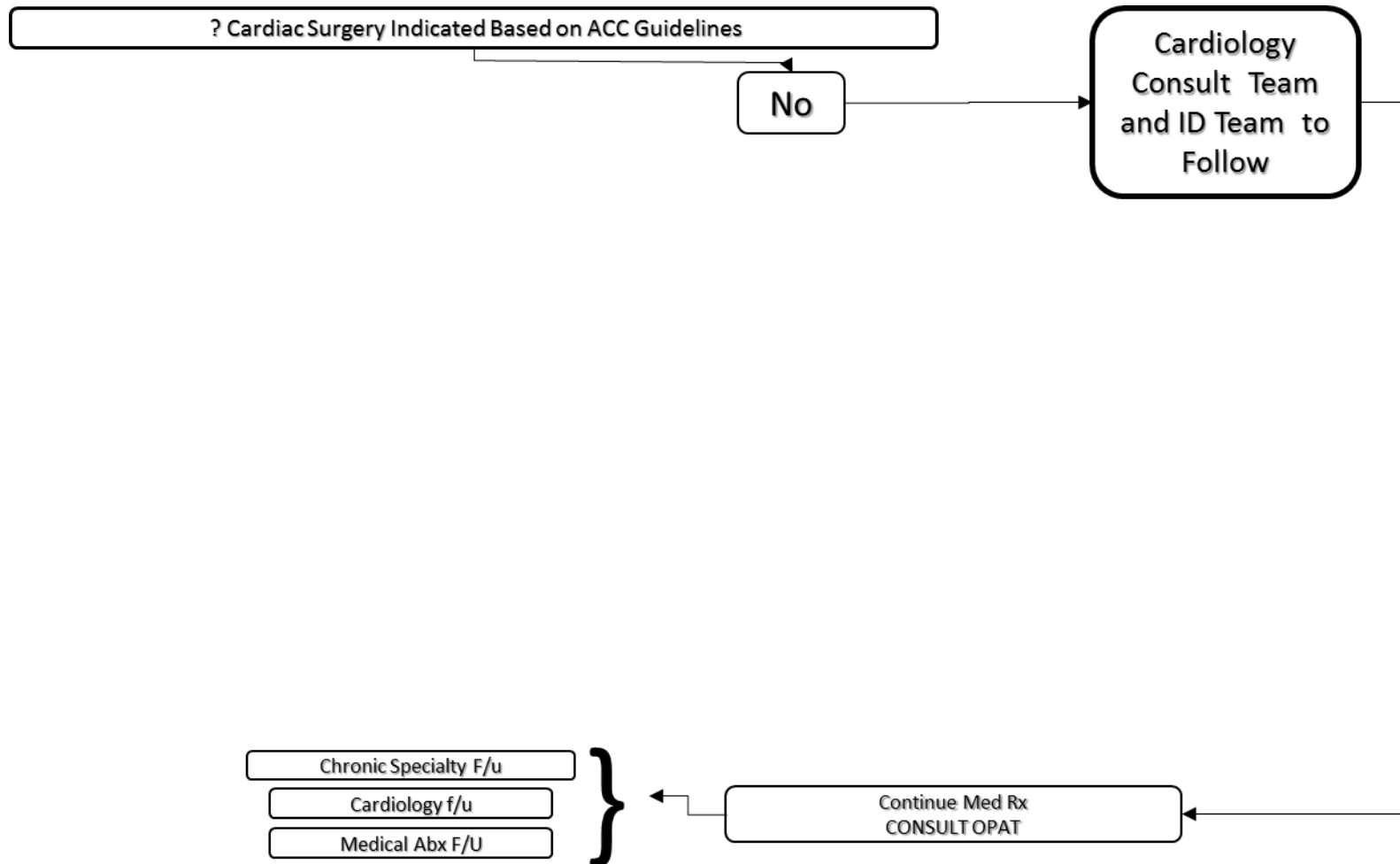
UW Endocarditis (IE) Care Pathway

Diagnosis and Risk Stratification

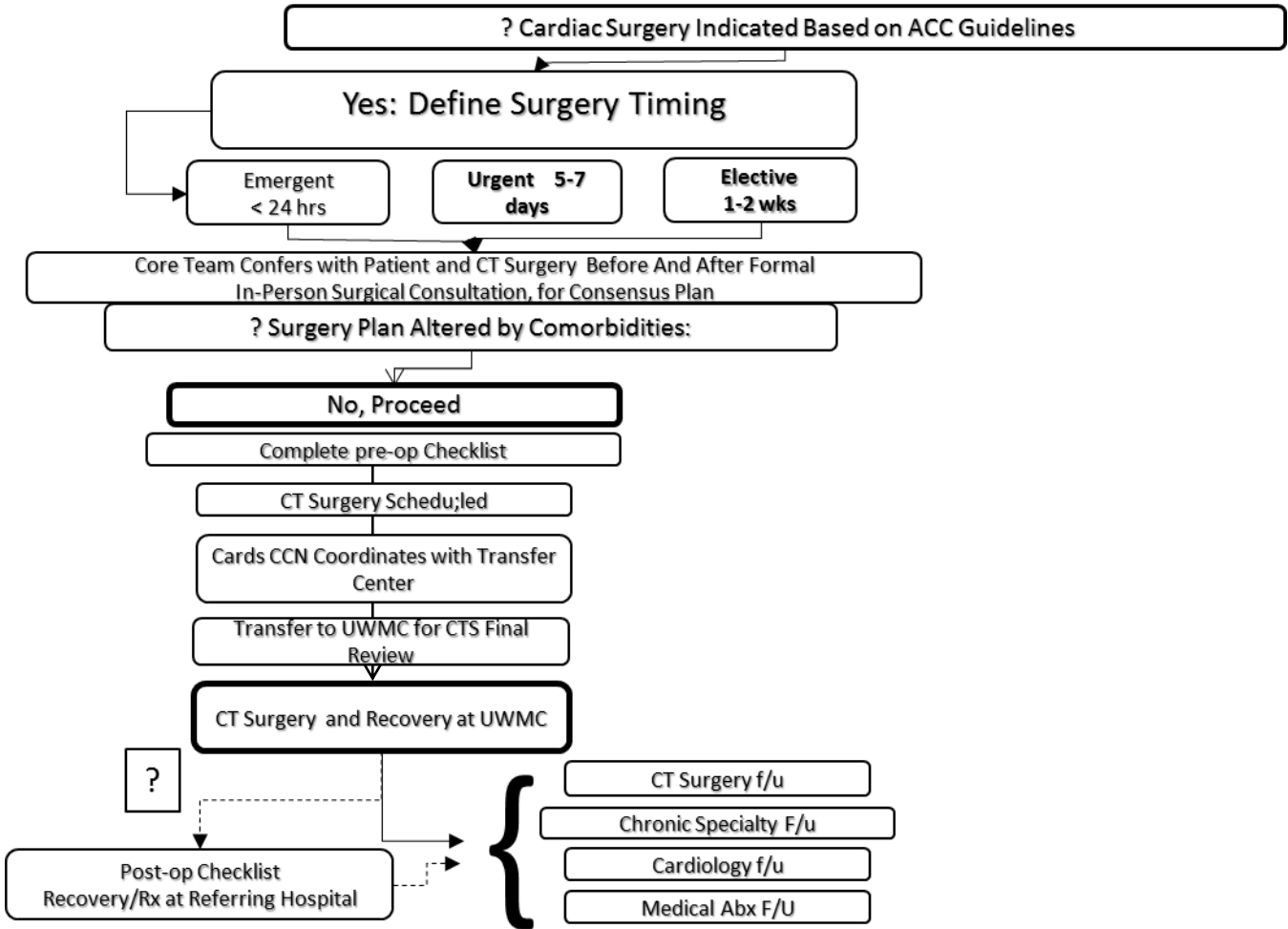


1. CT Surgery Not (yet) Indicated. Proceed with Medical Therapy and Follow-up.
2. IE Cardiac Surgery is Indicated and Can Proceed with Acceptable Risk and Benefit.
3. CT Surgery Indicated, but Comorbidities Need to be Addressed and Can be Resolved to Schedule Surgery with Acceptable Risk and Benefit.
4. CT Surgery May be Indicated, but Comorbidities Need to be Addressed and Cannot Yet be Resolved to Schedule Surgery with Acceptable Risk and Benefit

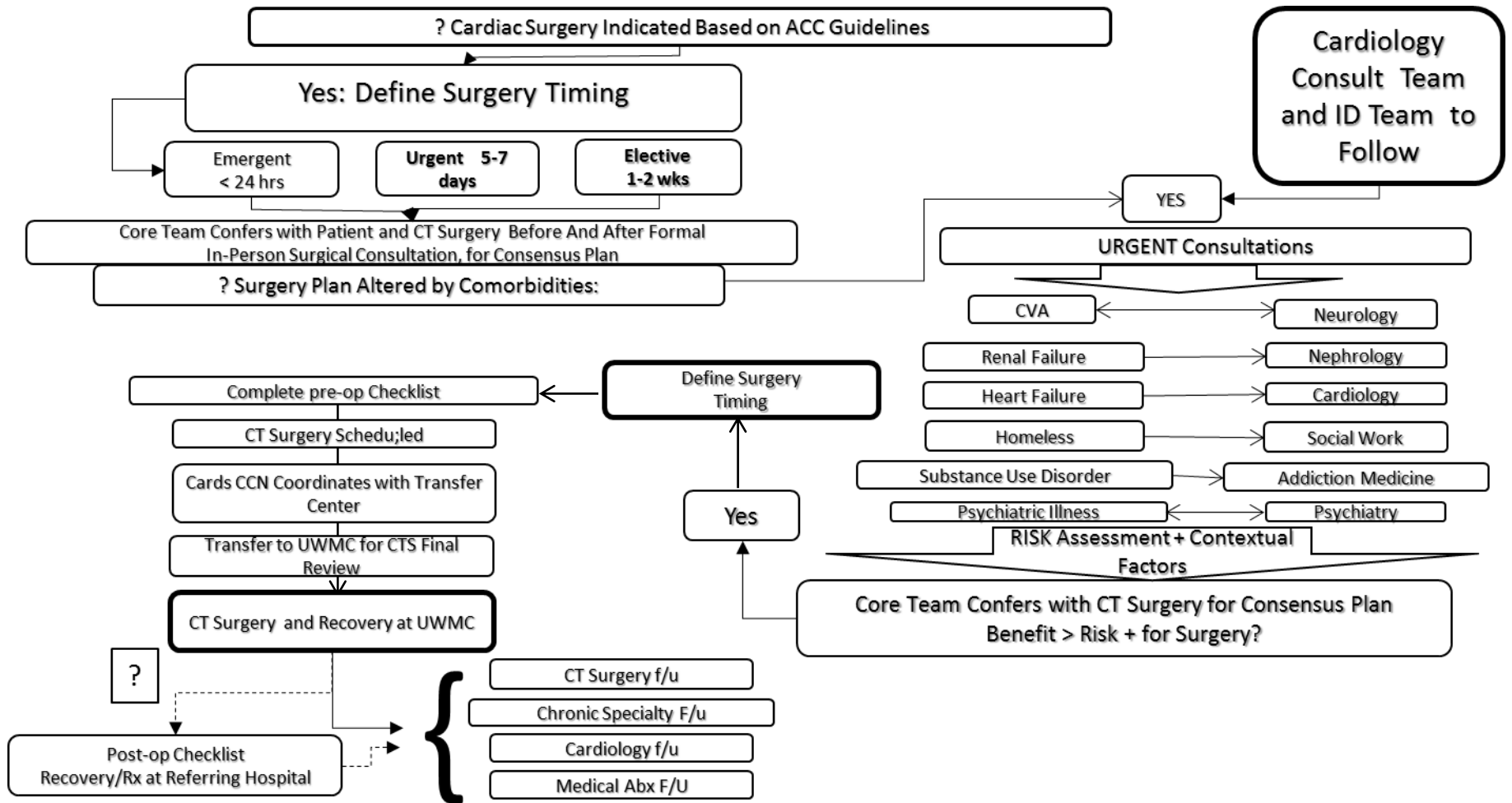
Sub-pathway (1) CT Surgery Not (Yet) Indicated. Proceed with Medical Therapy and Follow-up



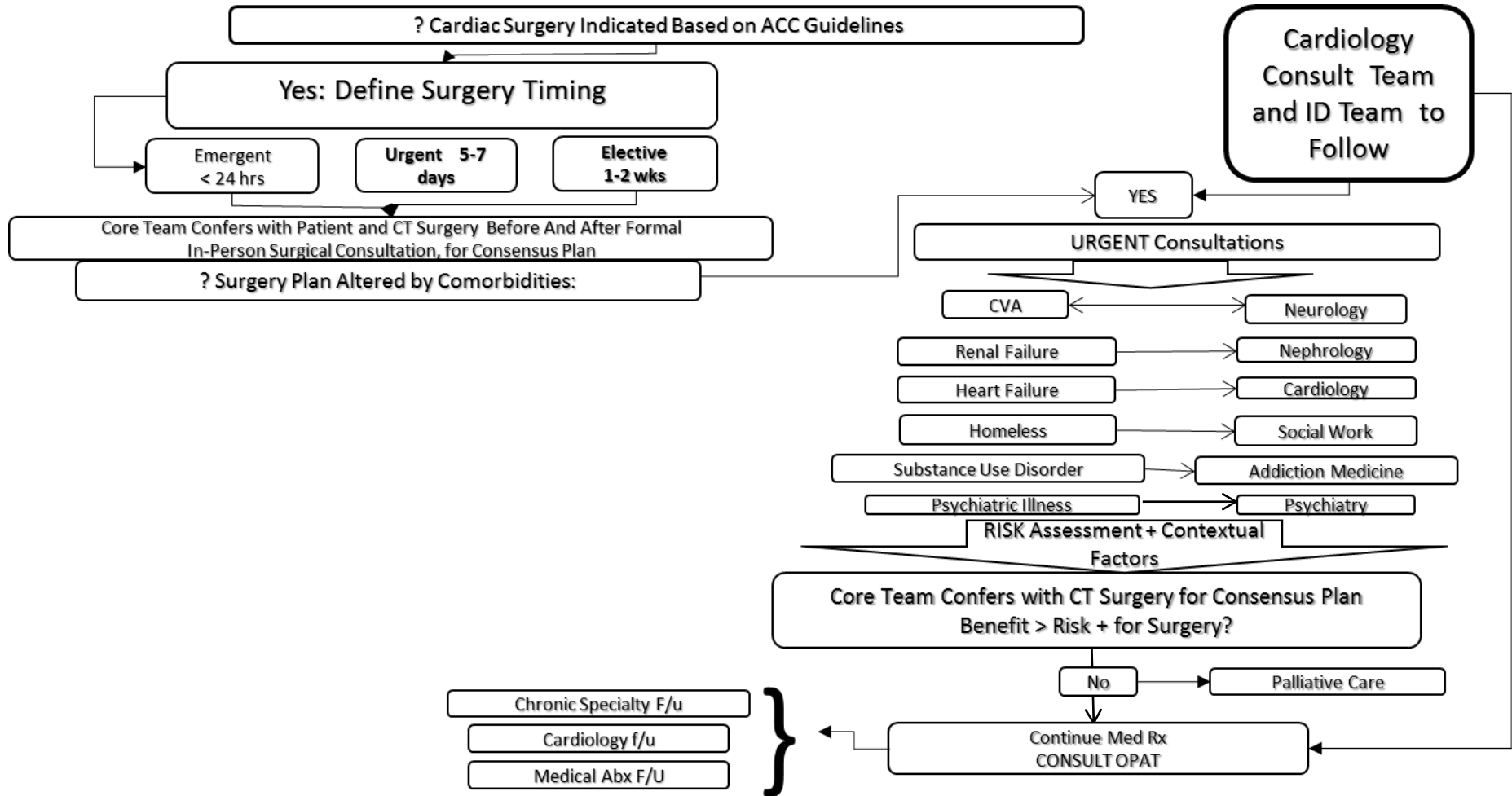
Sub-pathway (2). IE Cardiac Surgery is Indicated and Can Proceed with Acceptable Risk and Benefit



Sub-pathway (3). CT Surgery Indicated, but Comorbidities Need to be Addressed and Can be Resolved to Schedule Surgery with Acceptable Risk and Benefit



Sub-pathway (4). CT Surgery May be Indicated, but Comorbidities Need to be Addressed and Cannot Yet be Resolved to Schedule Surgery with Acceptable Risk and Benefit



UW Endocarditis (IE) Clinical Pathway

Diagnosis Team:
Primary Team, ID Attg, Echo Attg
Bacteremia + Echo Findings

Substance Use Disorder

NOT IE

SBIRT OPD Referral

IE Diagnosis Confirmed
(Mod Duke-Li Criteria)

YES

SBIRT Consult

Full Addiction Med Consult/Rx

Core IE Multidisciplinary Team (organized by ID)
(ID, CARD ECHO/CONSULT, 1^o TEAM, CCN)
Reviews pt < 24 hr

? Cardiac Surgery Indicated Based on ACC Guidelines

Yes: Define Surgery Timing

Emergent < 24 hrs

Urgent 5-7 days

Elective 1-2 wks

No

Cardiology Consult Team and ID Team to Follow

YES

URGENT Consultations

CVA

Neurology

Renal Failure

Nephrology

Heart Failure

Cardiology

Homeless

Social Work

Substance Use Disorder

Addiction Medicine

Psychiatric Illness

Psychiatry

RISK Assessment + Contextual Factors

Core Team Confers with CT Surgery for Consensus Plan Benefit > Risk + for Surgery?

No

Palliative Care

Continue Med Rx
CONSULT OPAT

Define Surgery Timing

Yes

Core Team Confers with Patient and CT Surgery Before And After Formal In-Person Surgical Consultation, for Consensus Plan

? Surgery Plan Altered by Comorbidities:

No, Proceed

Complete pre-op Checklist

CT Surgery Scheduled

Cards CCN Coordinates with Transfer Center

Transfer to UWMC for CTS Final Review

CT Surgery and Recovery at UWMC

?

Post-op Checklist
Recovery/Rx at Referring Hospital

- CT Surgery f/u
- Chronic Specialty F/u
- Cardiology f/u
- Medical Abx F/U

Endocarditis Core Team PowerNote

Endocarditis Core Team Note – PowerNote (5th Draft) as viewed opening in ORCA 02/01/2018

PRIMARY TEAM: <Hide Structure> <Use Free Text>

Hospital	HMC / UWMC / Other Hospital:===
Attending MD	Provider Look-Up / OTHER
Resident	Provider Look-Up / OTHER
Hospital floor	OTHER

CONSULTING SURGEON: <Hide Structure> <Use Free Text>

Consulting Cardiac Surgeon:	Provider Look-Up / OTHER
Surgical Chief Resident	Provider Look-Up / OTHER

IE HISTORY/EXAM: <Hide Structure> <Use Free Text>

Organism	OTHER
Sensitivities	OTHER
Valves/Structures Involved	Native / Prosthetic / CIED / OTHER

CLINICAL PROFILE: <Hide Structure> <Use Free Text>

Bacteremia	Resolved / Persistent
Infectious Source	Controlled / NOT Controlled / SST infection (skin abscess) / Injection drug use/injection drug use / OTHER
Heart Failure	Radiographic / NYHA II / NYHA III / NYHA IV
Heart Block	AV Block / Bundle Branch
Extracardiac Failure	Pulmonary / Renal / Liver