[redacted]

[redacted]

Progress Notes Signed

Encounter Date: 11/1/2022

Specialty: Cardiothoracic Surgery

Structural Heart Clinic
Consult for Aortic Valve Disease
Date of Service: 11/1/2022

[redacted]

Relevant Medical Problems:

 # Severe symptomatic aortic stenosis
 # Mild pulmonary HTN
 # Inflammatory polyarthropathy on chronic immunosuppression (Humira, methotrexate, prednisone)
 # Spinal stenosis s/p cervical spinal decompression 2018 and lumbar spinal decompression 02/2022
 # Essential HTN
 # HLD
 # Syncope (summer 2022)

Assessment and Plan:

Mr. [redacted] is a 69 y.o. referred to the Structural Cardiology Clinic for assessment of treatment options for aortic valve disease.

The patient has developed progressive DOE over the last year and currently reports symptoms that are consistent with NYHA functional class III.

I have reviewed both the images and reports from the following diagnostic tests which are notable for the following:

[redacted]

[redacted]

- **TTE** 10/12/2022: EF 60-65%, PG 57 mmHg, MG 41 mmHg, AVA 1.00 cm2, DVI 0.25, trace aortic insufficiency
- **Cardiac cath** 9/2/2021: mild non-obstructive CAD. Moderate AS on invasive assessment AVA 1.1 cm2, MG 31 mmHg. LVEDP 23 mmHg. Mild pulmonary HTN (PA 34/16 mean 24)
- **EKG** 8/31/2021: sinus, PR 164, QRSD 80

Based on symptoms, physical exam, and diagnostic studies we agree that the patient has severe symptomatic aortic stenosis. We feel that aortic valve replacement is indicated if technically feasible with a favorable risk benefit ratio. The patient states a goal of improving his DOE and low energy levels.

I recommend the following:

1. No need for repeat coronary angiography given recent study ~1 year ago and noted no significant CAD
2. TAVR CTA to evaluate aortic annular complex and potential for peripheral access.
3. Depending on result of CTA, will set up for either dual visit with Dr. Gupta and CTS (Dr. Slater vs Dr. Berquist) for formal determination of plan (SAVR vs TAVR), or straight to CTS for SAVR consult. In setting of chronic immunosuppressive therapy due to inflammatory polyarthropathy, notably his risk for open heart surgery and healing impairment is increased. Control of his psoriatic arthritis becomes significantly more challenging when he is required to hold immunosuppressive agents for > 1 week.
4. Sleep study referral for evaluation of occult obstructive sleep apnea given daytime somnolence and mild pulmonary HTN noted on RHC last year

If a TAVR were to be pursued, I anticipate that this patient would spent 1-2 nights in the hospital under intermediate level of cardiovascular care. He would NOT be a same day discharge candidate due to driving distance from SCB hospital.

I spent 60 minutes, greater than 50% of this time was spent in counseling and coordinating care.

[redacted]

Reason for Visit:
Consultation visit with Structural Heart Team for severe symptomatic aortic stenosis.

HPI:
Mr. [redacted] is a 69 y.o. male who is referred for consideration of treatment options for aortic stenosis. They have traditionally been followed by Jill Foley MD for cardiovascular co-morbidities. Last year, due to progressive chest pain, a TTE noted moderate AS with normal LV function. A coronary angiogram/RHC in 09/2021 noted moderate AS on invasive valve assessment, mild non-obstructive CAD, and mild pulmonary HTN. Due to persistent chest pain a year later, follow up TTE obtained in 10/2022 demonstrated progression of AS to severe with preserved systolic function. He was subsequently referred to the structural heart program for consideration of interventional options.

[redacted]

[redacted]

Currently:
[redacted] (lived there since April). He continues to work as a lawyer in litigation and business/trust law, but has considerably pulled back his hours over the last few years as he moves into retirement. He is an avid golfer, playing 18 holes at least twice a week. He has a brittany spaniel that he walks regularly as well. On days that he golfs, he achieves at least 10K steps, and on non-golf days, ~5K steps. When golfing, he does use a cart but there is still a lot of walking involved to and from the cart, often up short hills.

He felt like things initially went downhill when he was first diagnosed with psoriatic arthritis in 2010. He has had mild SOB and fatigue since 2012, but it has been progressive since then, particularly over the past year. Presently he feels tried every day; he gets 10 hrs of sleep, and still does not feel well rested. He has never had a formal sleep study.

While DOE and fatigue have been noticeable for 10 years as above, symptoms have become drastically more apparent as of late and are starting to interfere with his regular activities. He no longer takes his dog for long walks due to DOE, chest pressure/pain, dizziness, and fatigue. When golfing, he will get SOB and develop chest pain when walking up hills, and will get lightheaded when bending over to pick up a golf ball. During activities with heavier exertion (e.g. hanging a ladder), he will get SOB, have progressive chest discomfort, and become lightheaded; it takes nearly an hour for symptoms to dissipate if he has pushed himself too hard. He experienced a syncopal episode this past summer when walking up a hill at elevation; "came to" after about 5 seconds. He has not experienced recurrent syncope, but does report presyncope with heavy exertion.

Regading psoriatic arthritis, took a long time for formal diagnosis, and was in severe pain until the right "cocktail" was figured out for him. 3 mg of prednisone daily is about as low as he can go. If he misses his weekly Humira dose, it will take him about 2 weeks for symptoms to re-stabilize after resuming normal course if he misses 2 weeks of Humira, it can take a few months for symptoms to stabilize.

STS Adult Cardiac Surgery Database Version 4.20
RISK SCORES

Procedure: Isolated AVR

CALCULATE

Risk of Mortality:	1.028%
Renal Failure:	1.084%
Permanent Stroke:	1.351%
Prolonged Ventilation:	3.424%
DSW Infection:	0.248%
Reoperation:	3.444%
Morbidity or Mortality:	7.210%
Short Length of Stay:	58.229%
Long Length of Stay:	2.987%

Past Medical History:

Diagnosis	Date

[redacted]

[redacted]

- Allergic rhinitis
- Anemia
- Angina pectoris (CMS/HCC) 09/2021
- BPH (benign prostatic hyperplasia)
- Coronary artery disease
- Depression
- ED (erectile dysfunction)
- Heart murmur
- History of lipoma
- Hyperlipidemia
- Hypertension
- Nonrheumatic aortic (valve) stenosis
- Peripheral neuropathy
  BLE
- Pulmonary hypertension (CMS/HCC)
- Spinal stenosis, lumbar region, with neurogenic claudication 02/2022

Past Surgical History:

Procedure	Laterality	Date
• APPENDECTOMY		
• CATARACT EXTRACTION	Bilateral	
• CORONARY ANGIOGRAPHY W LEFT AND RIGHT HEART CATHS *Performed by* [redacted]	N/A	9/2/2021
• FORAMINOTOMY MINIMALLY INVASIVE OF CERVICAL SPINE W/ C-ARM		
• NECK SURGERY *growth removed*		11/2020
• SOFT TISSUE TUMOR RESECTION *benign tumor*		
• TONSILLECTOMY		

Family History

Problem	Relation	Age of Onset
• Rectal cancer	Mother	
• Other *valve surgery, ?BAV*	Father's Brother	

Paternal uncle - AVR

Social History

Socioeconomic History

- Marital status: Married
  - Spouse name: Not on file
- Number of children: Not on file
- Years of education: Not on file
- Highest education level: Not on file

Occupational History

- Not on file

Tobacco Use

- Smoking status: Never
- Smokeless tobacco: Never

Vaping Use

- Vaping Use: Never used

Substance and Sexual Activity

- Alcohol use: Yes
  - Alcohol/week: 7.0 standard drinks
  - Types: 7 Glasses of wine per week

[redacted]

[redacted]

• Drug use:	Never
• Sexual activity:	Not on file

Other Topics	Concern
• Not on file	

Social History Narrative

- Not on file

Social Determinants of Health

Financial Resource Strain: Not on file
Food Insecurity: Not on file
Transportation Needs: Not on file
Physical Activity: Not on file
Stress: Not on file
Social Connections: Not on file
Intimate Partner Violence: Not on file
Housing Stability: Not on file

Allergies

Allergen	Reactions
• Penicillins	Rash and Hives

ROS: Reviewed, please refer to scanned intake form for specifics

Current Outpatient Medications:

- atorvastatin (Lipitor) 20 mg tablet, Lipitor 20 MG Oral Tablet QTY: 90 tablet Days: 90 Refills: 3 Written: 07/01/21 Patient Instructions: TAKE 1 TABLET BY MOUTH NIGHTLY BEFORE BED, Disp: , Rfl:
- cyclobenzaprine (Flexeril) 10 mg tablet, Take 1 (one) tablet (10 mg total) by mouth every 8 (eight) hours as needed for muscle spasms., Disp: 30 tablet, Rfl: 0
- escitalopram (Lexapro) 10 mg tablet, Take 10 mg by mouth daily. , Disp: , Rfl:
- fluticasone propionate (Flonase) 50 mcg/actuation nasal spray, Administer 2 sprays into each nostril 2 (two) times a day as needed for rhinitis or allergies. , Disp: , Rfl:
- folic acid (Folvite) 1 mg tablet, Take 1 mg by mouth daily. , Disp: , Rfl:
- Humira,CF, Pen 40 mg/0.4 mL pen injector kit, 1 Dose once a week. Sundays , Disp: , Rfl:
- hydroCHLOROthiazide (Hydrodiuril) 25 mg tablet, Take 25 mg by mouth daily. , Disp: , Rfl:
- lisinopriL (Zestril) 40 mg tablet, Take 40 mg by mouth daily. , Disp: , Rfl:
- methotrexate (Rheumatrex) 25 mg/mL injection, once a week. Sunday., Disp: , Rfl:
- metoprolol succinate XL (Toprol-XL) 50 mg 24 hr tablet, Take 50 mg by mouth daily. , Disp: , Rfl:
- montelukast (Singulair) 10 mg tablet, Take 10 mg by mouth daily. , Disp: , Rfl:
- naproxen sodium (Aleve) 220 mg tablet, Take 220 mg by mouth every 12 (twelve) hours as needed for mild pain., Disp: , Rfl:
- nitroglycerin (Nitrostat) 0.4 mg SL tablet, Place 1 (one) tablet (0.4 mg total) under the tongue every 5 (five) minutes as needed for chest pain., Disp: 25 tablet, Rfl: 11
- predniSONE (Deltasone) 1 mg tablet, Take 3 mg by mouth daily. , Disp: , Rfl:
- tadalafiL (Cialis) 5 mg tablet, Take 5 mg by mouth daily as needed for erectile dysfunction. , Disp: , Rfl:

PHYSICAL EXAM

Vitals:

	11/01/22 0930
BP:	115/76

[redacted]

[redacted]

Pulse: 77
SpO2: 96%

Body mass index is 33 kg/m².
General Appearance: Healthy appearing, well developed well nourished adult male appearing stated age in NAD.
HEENT: PERRLA, EOMI, mouth without lesions.
Neck: Neck w/o LAD
Respiratory: CTA bilaterally. No wheezes or rales
Cardiovascular: JVP at 8 cm. 2+ carotid pulses without bruits. PMI nondisplaced. RRR. Normal S1 & absent S2. III/VI late peaking crescendo decrescendo systolic murmur best audible at RUSB radiating to all cardiac sites. No gallops, or rubs. 2+ distal pulses.
Gastrointestinal: +BS, soft, nondistended, nontender, no abdominal bruits
Musculoskeletal: No gross deformities
Extremities: No cyanosis, clubbing, or edema.
Neurologic: Grossly nonfocal. UE and LE proximal and distal strength 5/5 and equal bilaterally.
Skin: No rash or ulcers.

Lab Review:

Chemistry

Component	Value	Date/Time	Component	Value	Date/Time
NA	137	08/31/2021 1228	CALCIUM	9.0	08/31/2021 1228
K	4.3	02/16/2022 1215			
CL	100	08/31/2021 1228			
CO2	27	08/31/2021 1228			
BUN	33 (H)	08/31/2021 1228			
CREATININE	0.9	08/31/2021 1228			

Lab Results

Component	Value	Date
WBC	7.8	08/31/2021
HGB	13.4	08/31/2021
HCT	40.2	08/31/2021
MCV	104.4 (H)	08/31/2021
PLT	214	08/31/2021

TTE 10/12/2022 SCMC

- Left Ventricle: Systolic function is normal with an ejection fraction of 60-65%.
- Right Ventricle: Systolic function is normal.
- Aortic Valve: There is severe stenosis (pk vel: 4 m/s, mn grad: 41 mmHg, area: 1.00 cm², VTI ratio: 0.25). This has worsened compared to the prior study.

LVOT diameter	2 cm

[redacted]

[redacted]

LVOT area	3.14 cm2
LVOT peak vel	1.17 m/s
LVOT peak VTI	25.4 cm
AV peak vel	4 m/s
AV VTI	100 cm
AV VTI ratio	0.25
AV area	1 cm2
AV mean gradient	41 mmHg
AV peak gradient	57 mmHg
AV velocity ratio	

CARDIAC CATH 9/2/2021 SCMC

- Mild coronary atherosclerosis.
- The left ventricular systolic function is normal.
- The ejection fraction is greater than 65-70% by visual estimate.
- LV end diastolic pressure is moderately elevated.
- The LV end diastolic pressure measures: 23 mmHg; PCWP = 12 mmHg.
- Moderate aortic valve stenosis consistent with echo findings: LV 140/23, Ao 108/59, mean gradient 31 mmHg, calc AVA 1.1 cm2/ Aortic area index 0.5.
- Mild pulmonary HTN: PA 34/16, mean 24 mmHg; RV 34/8
- TDCO 6.4 L/min, CI 2.8; Fick 5.8 L/min, 2.55

EKG 8/31/2021 SCMC:

Measurements

Intervals		Axis	
Rate:	75	P:	61
PR:	164	QRS:	9
QRSD:	80	T:	35
QT:	384		
QTc:	428		

Interpretive Statements

Sinus rhythm
Compared to ECG 11/11/2020 08:32:11
No significant changes

Office Visit on 11/1/2022 *Note viewed by patient*

Additional Documentation

[redacted]

[redacted]

Vitals: BP 115/76 (BP Location: Left arm, Patient Position: Sitting) Pulse 77 Ht 1.778 m (5' 10") Wt 104 kg (230 lb)
SpO2 96% BMI 33.00 kg/m² BSA 2.21 m²

Orders Placed

CT TAVR (chest abdomen pelvis) with contrast (Resulted 11/8/2022)

Medication Changes

As of 11/1/2022 9:33 AM

None

Visit Diagnoses

Primary: **Symptomatic severe aortic stenosis with normal ejection fraction** I35.0
Daytime somnolence R40.0
Psoriatic arthritis (CMS/HCC) L40.50
Syncope and collapse R55
Essential hypertension I10
Spinal stenosis of cervical region M48.02
Immunosuppressed status (CMS/HCC) D84.9
Hyperlipidemia, mixed E78.2

[redacted]