ADVANCE OPINION

AO Multidisciplinary Cardiovascular Case Review
& Management Recommendations for:

Jane B. Doe

AI-Powered Surgical Clarity • January 2026

Dear Ms. Doe,

Thank you for choosing Advance Opinion for your cardiovascular case review. This report represents a comprehensive, multidisciplinary evaluation of your cardiac condition and proposed treatment plan.

Our review integrates advanced AI-powered risk analysis with expert physician judgment from leading cardiovascular experts. We have carefully analyzed your medical records, imaging studies, and laboratory results to provide you with an independent assessment of your diagnosis and treatment options.

This report includes:

- A complete review of your current diagnoses and proposed surgical plan
- Personalized risk analysis using validated scoring systems
- Guideline-based assessment of surgical indications
- Treatment options with our recommendations
- Suggested centers of excellence for your procedure

We understand that facing cardiac surgery is a significant decision. Our goal is to provide you with the clarity and confidence you need to make the best choice for your health. Please do not hesitate to contact us directly with any questions.

We are honored to be part of your care team.

Sincerely,

Sandeep Patel

Sandeep M. Patel, MD
Structural & Interventional Cardiology
Advance Opinion

Rahul R. Handa, MD
Cardiovascular Surgeon
Advance Opinion

Patient Profile

PATIENT NAME
Jane B. Doe

DATE OF BIRTH
March 15, 1951 (Age 74)

REPORT ID
AO-2026-0128-DOE-7842

CONSULTATION DATE
January 28, 2026

REFERRING PHYSICIAN
Robert M. Thompson, MD

INSTITUTION
Heartland Cardiovascular Associates

Current Care Team

CARDIOLOGIST
Robert M. Thompson, MD
Heartland Cardiovascular Associates, Chicago, IL

CARDIAC SURGEON
William J. Harrison, MD
Midwest Regional Medical Center, Chicago, IL

Current Diagnoses

Severe Aortic Stenosis
Critical narrowing of the aortic valve requiring intervention

Moderate Mitral Regurgitation
Leakage of the mitral valve causing backflow into the left atrium

Triple-Vessel Coronary Artery Disease
Significant blockages in LAD (80%), Circumflex (70%), and RCA (75%)

Persistent Atrial Fibrillation
Irregular heart rhythm increasing stroke risk

Surgical Planning

Current Proposed Plan

As recommended by your current surgical team

CABG

Coronary Artery Bypass Grafting

Bypass of three blocked coronary arteries using arterial and venous grafts.
Restores blood flow to oxygen-starved heart muscle, relieving angina.

AVR

Aortic Valve Replacement

Replacement of severely stenotic aortic valve with a bioprosthetic valve.
Eliminates the obstruction to blood flow and reduces strain on the heart.

MVr

Mitral Valve Repair

Repair of regurgitant mitral valve to restore proper closure.
Preferred over replacement when feasible, preserving native heart function.

Maze

Cox-Maze IV Procedure

Surgical ablation for atrial fibrillation to restore normal heart rhythm.
Creates scar tissue that interrupts irregular electrical signals.

AO Recommendation

We concur with surgical intervention and recommend the following modification:

Add Left Atrial Appendage Exclusion (LAAx) to Maze Procedure

The left atrial appendage is the source of >90% of stroke-causing clots in atrial fibrillation patients. Adding LAAx during the Maze procedure significantly reduces long-term stroke risk with minimal additional surgical time or risk.

This is a Class IIa recommendation per ACC/AHA guidelines for patients undergoing cardiac surgery with a history of atrial fibrillation.

Your Advance Opinion Concierge Heart Team

Direct access to your reviewing physicians

Sandeep M. Patel, MD

Structural & Interventional Cardiology

Direct Line (SMS/Call): (513) 555-0147

Email: Dr.Patel@advanceopinion.com

Rahul R. Handa, MD

Cardiovascular Surgeon

Direct Line (SMS/Call): (702) 555-0193

Email: Dr.Handa@advanceopinion.com

Direct 24/7 Access

Your AO physicians are available around the clock to answer questions, clarify recommendations, or coordinate with your care team.

Guideline-Based Surgical Indications

Based on ACC/AHA/STS Clinical Practice Guidelines

I — **Strong indication**
Procedure should be performed

IIa — **Moderate indication**
Procedure is reasonable

IIb — **Weak indication**
Procedure may be considered

III — **No benefit or harm**
Procedure should not be performed

Your Indications

- **I** — AVR for severe symptomatic aortic stenosis
- **I** — CABG for triple-vessel coronary artery disease
- **IIa** — MV repair for moderate mitral regurgitation during cardiac surgery
- **IIa** — Surgical ablation (Maze) for atrial fibrillation during cardiac surgery
- **IIa** — Left atrial appendage exclusion during surgical ablation

Personalized Risk Analysis

Predicted 30-day operative mortality for your proposed procedure

The Society of Thoracic Surgeons	EuroSCORE	AATS
5.7%	**6.1%**	**4.2%**
Society of Thoracic Surgeons	European System for Cardiac Operative Risk	American Association for Thoracic Surgery

AO COMPOSITE SCORE

4.8%

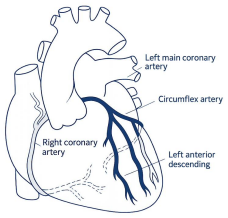
AI-synthesized from 75+ clinical variables

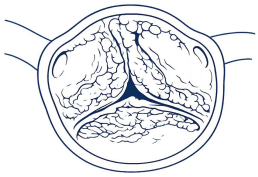
Average open-heart surgery mortality is 1.5-2%. Your risk is elevated due to multi-valve disease, AFib, and coronary involvement.

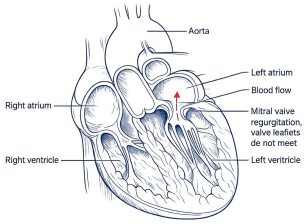
Additional Predicted Outcomes

Major Complications	**18.4%**	Prolonged Ventilation	**9.3%**
Stroke	**2.1%**	Reoperation	**5.2%**
Renal Failure	**4.8%**	Hospital Stay >7 days	**68.2%**

Understanding Your Conditions







Coronary Artery Disease
LAD 80%, LCx 70%

Aortic Stenosis
Severe calcific narrowing

Mitral Regurgitation
Moderate leaflet dysfunction

Treatment Options

Recommended **Complete Surgical Correction**

CABG + AVR + MVr + Maze + LAAx — addresses all conditions in single operation.

Pro: One recovery period, lowest cumulative risk. Con: Longer initial surgery time.

Alternative **Core Procedures Only**

CABG + AVR + Maze — defer mitral intervention if intraoperative assessment favorable.

Pro: Shorter OR time if MV looks acceptable. Con: May require future reoperation.

Not Recommended **Staged Approach**

Multiple separate operations increase cumulative risk without clear benefit.

Pro: None significant in your case. Con: Higher total mortality risk, multiple recoveries.

Recommended Surgical Centers

Centers of excellence for complex combined cardiac procedures

MAYO CLINIC

Rochester, Minnesota

Joseph A. Dearani, MD

Chair, Department of Cardiovascular Surgery

Mayo Medical School • Mayo Clinic Residency & Fellowship

Mayo performs 3,500+ cardiac operations annually with an integrated practice model ensuring seamless coordination.

STS Ratings: **CABG ★★★** **AVR ★★★** **CABG+Valve ★★★**

Cleveland Clinic

Cleveland, Ohio

Lars Svensson, MD, PhD

Chair, Heart, Vascular & Thoracic Institute

University of Witwatersrand • Cleveland Clinic & Baylor Fellowship

Ranked #1 in cardiac surgery for 30 consecutive years. Internationally recognized expertise in aortic and valve surgery.

STS Ratings: **CABG ★★★** **AVR ★★★** **CABG+Valve ★★★**

JOHNS HOPKINS UNIVERSITY

Baltimore, Maryland

James S. Gammie, MD

Cardiac Surgeon-in-Chief

University of Pennsylvania • Johns Hopkins Residency & Fellowship

Distinguished legacy with nationally leading mitral valve repair rates. Extensive research contributions to the field.

STS Ratings: **CABG ★★★** **AVR ★★★** **CABG+Valve ★★★**

Diagnostic Workup Review

Completed Studies

✓ **Transthoracic Echocardiogram (TTE)**

This ultrasound of your heart confirmed severe aortic stenosis with a valve area of only 0.8 cm² (normal is 3-4 cm²) and a pressure gradient of 48 mmHg. It also showed moderate mitral regurgitation and a healthy heart pumping function (EF 55%).

✓ **Left Heart Catheterization**

This procedure directly measured pressures in your heart and visualized your coronary arteries. It confirmed significant blockages in all three major vessels: LAD (80%), Circumflex (70%), and RCA (75%), which is why bypass surgery is recommended.

✓ **Laboratory Panel**

Your blood tests show an elevated HbA1c of 8.1%, indicating your diabetes needs better control before surgery to reduce infection risk. Kidney function (Cr 1.2) is normal, and BNP of 285 suggests mild heart strain.

✓ **CT Chest with Coronary Mapping**

This scan evaluated your lungs and chest, confirmed heavy calcification of your aortic valve, and assessed your left internal mammary artery which appears suitable for use as a bypass conduit.

Recommended Additional Studies

■ **Transesophageal Echocardiogram (TEE)**

A more detailed ultrasound performed through your esophagus will give surgeons precise images of your mitral valve anatomy to plan the best repair approach.

■ **Cardiac MRI**

This scan can detect areas of heart muscle scarring or reduced blood flow, helping determine which areas will benefit most from bypass surgery.

■ **Pulmonary Function Tests**

These breathing tests assess your lung capacity and help the anesthesia team plan for your surgery and recovery.

■ **Carotid Ultrasound**

This non-invasive test checks for blockages in the arteries supplying your brain, which is routine before cardiac surgery to assess stroke risk.

Hospital Quality Ratings

STS Star Ratings compare hospital outcomes to national benchmarks

Your Current Hospital

Midwest Regional Medical Center

Chicago, Illinois

CABG	★★■
AVR	★★★
CABG+Valve	★■■

Lower volume in complex combined procedures like yours.

Recommended Centers

Mayo Clinic

Rochester, MN

CABG	★★★
AVR	★★★
CABG+Valve	★★★

Cleveland Clinic

Cleveland, OH

CABG	★★★
AVR	★★★
CABG+Valve	★★★

Johns Hopkins

Baltimore, MD

CABG	★★★
AVR	★★★
CABG+Valve	★★★

Understanding STS Star Ratings

The Society of Thoracic Surgeons rates hospitals based on risk-adjusted patient outcomes. Three stars (★★★) = above average, Two stars (★★■) = average, One star (★■■) = below average.

Frequently Asked Questions

Why is a second opinion important for heart surgery?

Heart surgery carries significant risks, and surgical planning decisions can dramatically affect outcomes. Studies show that second opinions change the treatment plan in over 70% of complex cardiac cases. An independent review ensures you have explored all options.

How did you select these recommended surgeons?

We evaluated surgeons based on procedural volume, published outcomes, STS quality ratings, sub-specialty expertise relevant to your conditions, and institutional resources. Each recommendation matches your specific clinical needs.

What if I want to stay with my current hospital?

That's completely your choice. This report provides information to help you make an informed decision. If you proceed locally, share our recommendations with your surgeon—they may be valuable for surgical planning.

How accurate are the risk predictions?

Our risk models are validated against national databases with excellent predictive accuracy. However, individual outcomes depend on many factors. These percentages represent statistical probabilities, not guarantees.

Can you help coordinate care at a recommended center?

Yes. Advance Opinion provides concierge coordination services. We can facilitate medical record transfers, schedule consultations, and help navigate logistics. Contact your AO physician team directly.

Your Next Steps

A clear path forward for your cardiac care

1

Review This Report With Family

Take time to read through our findings and discuss them with your loved ones. Understanding your options is the first step to making the right decision.

2

Schedule a Call With Your AO Team

We're available to answer any questions, clarify medical terminology, or discuss our recommendations in detail. Call us directly or email to schedule.

3

Complete Recommended Testing

If additional workup was recommended (like TEE or cardiac CT), coordinate with your local cardiologist or contact us for assistance scheduling these studies.

4

Consider Consultation at a Recommended Center

If you'd like to explore surgery at one of our recommended institutions, we can help coordinate a consultation. Many centers offer virtual initial visits.

5

Make an Informed Decision

Whether you proceed locally or at a center of excellence, you now have the information to advocate for your best care. We're here to support you either way.

Ready to Take the Next Step?

Contact your AO Heart Team directly:

support@advanceopinion.com • 1-888-AO-HEART • advanceopinion.com

ADVANCE OPINION

The Expert Layer for Cardiovascular Care

Report Verification

This report was independently reviewed and verified by:

Sandeep M. Patel, MD & Rahul R. Handa, MD

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