This booklet will help you understand what aortic stenosis (AS) is and what treatment options are available. This booklet is specifically for individuals who cannot have open-heart surgery. You, your family, and your clinicians can begin to discuss which treatment option is best for you.

**ALONG THE WAY, WE WANT YOU TO THINK ABOUT:**

- What your goals are for treating your AS?
- What concerns you have about your treatment options?
- What additional questions you have for your clinician?
UNDERSTANDING AS

Aortic Stenosis (AS) is tightening of the aortic valve in the heart. This can get worse over time. AS makes it harder for the heart to do its job.

SYMPTOMS OF SEVERE AS INCLUDE:
- feeling dizzy like you might pass out
- feeling tired
- trouble breathing
- chest pain
- swelling of the legs

You may be experiencing some of these symptoms. They may make it harder to do the things you want to do. If left untreated, these symptoms usually get worse over time and can lead to death. Prior to the decision, you may need to have additional testing to help your clinician understand what your options are.

Will Treatment Help?

THIS IS THE BIG QUESTION!

If symptoms are from severe AS, fixing your aortic valve may help you feel better and live longer.

If symptoms are from OTHER health problems, fixing your aortic valve may NOT help you feel better OR help you live longer.

It is important to understand whether treatment for severe AS will help you feel better and/or live longer.

Understanding what is causing your symptoms

To understand this big question, think about your other health problems. Here are some health problems that may cause similar symptoms that will not get better with treatment for AS.

- Being out of shape
- Depression
- Kidney disease
- Lung disease
- Cancer
- Arthritis
- Other heart disease
- Alzheimer’s

It can be hard to tell if your symptoms are from AS or not. Talk with your clinician about your symptoms and what could be causing them.
TREATMENT OPTIONS

**TAVI**
Transcatheter Aortic Valve Implantation
Transcatheter Procedure

**WHAT:**
TAVI is a procedure where a new valve is placed in the heart through a small tube (called a “catheter”) typically in the leg.

**HOW:**
This procedure involves a small incision where a catheter is inserted to access the heart to replace the valve.

**WHO:**
This method is an option for both patients who are and those who are not candidates for open-heart surgery.

**HOSPITAL STAY:**
On average, 2-3 days

**RECOVERY TIME:**
On average, 1-2 weeks

**SYMPTOM MANAGEMENT**
Taking Medication Only

**WHAT:**
Partnering with your clinician to try and control symptoms with medications, without fixing the valve.

**HOW:**
This option involves using medications that will not prolong life but may limit the symptoms of severe AS.

**WHO:**
This method is an option for patients who do not wish to have surgery or have too many other health problems that are not related to severe AS.

**HOSPITAL STAY:**
No procedure that involves a hospital stay.

**RECOVERY TIME:**
No procedure to recover from
**MORE INFORMATION ON YOUR TREATMENT OPTIONS FOR AS — BENEFITS**

**TAVI**

**+ BENEFITS:**
- Helps you live longer
- Helps you feel better

**Symptom Management**

**+ BENEFITS:**
- Focus on symptom management and comfort
- No surgery or procedures and no recovery time

It can be scary to think about life and death. However, many people in your position also feel it is important to have information about how likely it is for TAVI to help patients live longer.

**WHAT ARE THE BENEFITS OF CHOOSING TAVI?**

Results from a 2-year study*

<table>
<thead>
<tr>
<th>With TAVI</th>
<th>Without TAVI</th>
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<tbody>
<tr>
<td>After two years <strong>with</strong> TAVI, 57 of 100 patients were still living and 43 died.</td>
<td>After two years <strong>without</strong> TAVI, 32 of 100 patients were still living and 68 died.</td>
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</tbody>
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* = Unaffected

** = Lived longer with TAVI

* = Died within 2 years

*Makkar et al. (2012).

New England Journal of Medicine

The choice between TAVI and Symptom Management is ultimately a very personal one that is based on your overall health, values and individual preferences.
MORE INFORMATION ON YOUR TREATMENT OPTIONS FOR AS — RISKS

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<tr>
<th>TAVI</th>
<th>Symptom Management</th>
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**RISKS:**
- Death (from procedure)
- Bleeding
- Stroke
- Heart attack
- Infection
- Blood clots
- Increased chance of needing a pacemaker implanted
- Vascular injury (puncture)

**RISKS:**
- Death (from AS)
- Ongoing symptoms that may get worse
- Medications do not fix your valve

Medications will focus on relieving symptoms themselves. People who choose Symptom Management are often interested in **palliative care** (See below).

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**What is palliative care?**

Palliative care is medical care for people with serious illness. It helps provide relief from symptoms, pain and stress. It also provides emotional and spiritual support. The goal of palliative care is to improve quality of life for patients and caregivers.

**What is hospice?**

Hospice is care given by health professionals for patients near the end of their lives. This care includes medical, emotional, and spiritual support, and helps to provide comfort and quality of life for patients. Hospice care usually occurs within a patient’s home. It can also occur in other settings such as a hospice facility or nursing home.

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Whether you decide **TAVI** or **Symptom Management** is the right choice for you, there are services available to help with symptoms and suffering of advanced illness.
TREATMENT SCENARIO 1

Jane is an 80-year-old woman with severe aortic stenosis.

- She also has moderate lung disease and diabetes.
- She has shortness of breath when she walks across a room.
- Her clinician thinks it might be related to her aortic valve. Jane talked to her clinician to better understand the risks and benefits involved with her options.

### Option 1: TAVI

The majority of Jane’s symptoms are from severe AS. Replacing her valve would likely improve her symptoms and may also extend her life.

After talking to her clinician, Jane decided the TAVI procedure was the best option for her. She hoped replacing her valve would improve her symptoms caused by AS and help her feel better.

### Option 2: Symptom Management

Replacing her valve won’t fix all of Jane’s symptoms. Jane is concerned about some of the risks that can happen with the TAVI procedure. Jane is worried her other illnesses like diabetes may continue to get worse.
TREATMENT SCENARIO 2

- GEORGE IS AN 83 YEAR-OLD MAN WITH SEVERE AORTIC STENOSIS. HE HAS SEVERE LUNG DISEASE AND HAS BEEN IN THE HOSPITAL FOR HEART FAILURE.
- He has trouble with his memory and needs help walking across the room due to a prior stroke.
- At the same time, he is losing weight and uses his wheelchair more than he used to. George’s family was not sure if he should have his valve replaced.
- His clinician offered TAVI but was not sure if it would help his symptoms.

**Option 1: TAVI**

TAVI might help some of George’s symptoms.

**Option 2: Symptom Management**

Replacing his valve might NOT help George’s symptoms. George will still have symptoms of heart failure and difficulties from his stroke. George is more concerned with symptom management than aggressive treatment at this time.

After talking to his clinician George decided **Symptom Management** was the best choice for him. He and his family are not sure TAVI will help him with his symptoms and he does not want any more procedures.
MAKING YOUR DECISION

There is a lot to think about when trying to decide which path is right for you.

Take some time to consider what you have learned about treatments for severe aortic stenosis. If you’re still not sure what the best choice is for you, ask yourself these questions.

What do you hope for with TAVI or Symptom Management?

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What concerns do you have with TAVI or Symptom Management?

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What questions do you have for your clinician?

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What questions do you have for your family and loved ones?

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DISCLOSURES: Updated: August 2017 (This decision aid will be reviewed annually) | Funded by: American College of Cardiology | Authors: Christopher Knoepke, PhD, LCSW; Kenneth Pierce, BA; M. Pilar Ingle, MSW; Larry A. Allen, MD, MHS, FACC; Amy Jenkins, MS; Javier Valle, MD, MS; Kristy Gama MSN, APRN, NP-BC; John Carroll, MD, FACC, Daniel D. Matlock, MD, MPH | Conflicts of Interest: Christopher Knoepke: none; Kenneth Pierce: none; M. Pilar Ingle: none; Larry A. Allen: Novartis, Janssen, PCORI, AHA, NIH, (employer CU); Javier Valle: None; Kristy Gama: None; John Carroll: Local investigator for the Medtronic clinical trial of TAVI versus SAVR for low risk aortic stenosis patients; local investigator for the Edwards LifeSciences PARTNER II clinical trial; Dan Matlock: None

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