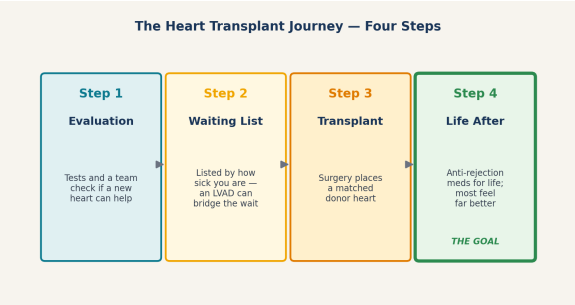
Understanding Heart Transplant

A New Heart for End-Stage Heart Failure — What to Expect

When the heart can no longer keep up, a transplant can give many people years of better living.



Online: https://go.riasalimd.com/transplant-guide

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Names & Terms You Will Hear

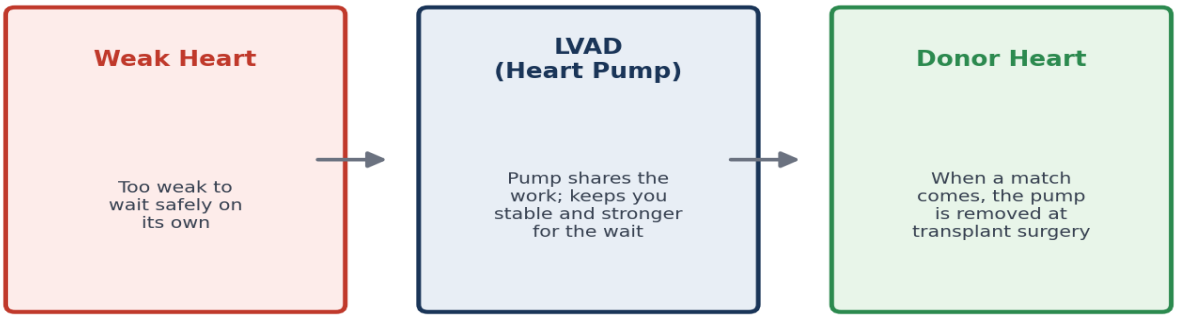
Term	Meaning
Heart transplant	Surgery to replace a failing heart with a healthy donor heart.
Cardiac transplantation	The medical name for a heart transplant.
Orthotopic heart transplant	The standard type. The donor heart goes in the normal spot after the old heart is removed.
End-stage heart failure	Heart failure so severe that medicines and devices are no longer enough. This is when transplant is considered.
Donor heart	A healthy heart given by someone who has died and chose to donate.
Transplant waiting list	The national list (run by UNOS) of people approved and waiting for a donor heart.
LVAD	Left ventricular assist device — a pump that helps the weak heart. It can bridge you while you wait for a transplant.
Immunosuppressants	Anti-rejection medicines. They stop the body from attacking the new heart. You take them for life.
Rejection	When the body's defenses attack the new heart. It is watched for closely and is usually treatable when caught early.
Endomyocardial biopsy	A small tissue sample of the new heart, taken through a vein, to check for rejection.

Call your transplant team right away for a fever over 100.4 F, chills, new shortness of breath, fast weight gain, new swelling, or unusual tiredness. Anti-rejection medicines can hide infection and mask rejection — so do not wait. **Call 911** for chest pain, fainting, or stroke signs.

What Is Heart Transplant?

- A heart transplant is surgery that replaces a failing heart with a healthy heart from a donor who has died and chose to donate.
- It is for end-stage heart failure — when the heart is so weak that medicines, devices, and a heart pump are no longer enough.
- A transplant does not 'cure' heart failure. It trades a failing heart for a healthy one that needs lifelong care and anti-rejection medicine.
- Getting a transplant is a journey with four steps: evaluation, the waiting list, the surgery, and life after.
- Most donor hearts are placed in the normal spot (called orthotopic). The donor heart must match your blood type and body size.
- About 4,000 to 4,500 heart transplants are done in the United States each year. The number is limited by how many donor hearts are available.
- A transplant is one of several advanced heart failure options. Your team helps you choose the path that fits your health and goals. See our Advanced Heart Failure guide.

An LVAD Can Bridge You While You Wait



This is called bridge-to-transplant. Not everyone needs an LVAD — many wait without one.

An LVAD (left ventricular assist device) is a pump that can bridge you while you wait for a donor heart. It shares the work of the weak heart and keeps you stronger. The pump is removed at transplant surgery. Not everyone needs one.

Ask for referral early — before a crisis. Donor hearts are scarce and the evaluation takes time. Being referred to a transplant center while you are still stable gives you the best chance to be evaluated and listed in time.

Why It Matters

- For end-stage heart failure, transplant is the best long-term option. More than 85% of people are alive 1 year later (ISHLT registry).
- Median survival after transplant is over 12 years. Many people live far longer with good care.
- Most people feel much better. They can walk, work, travel, and return to many activities they had given up.
- Without a transplant, end-stage heart failure has a very high death rate — often 50% or more within a year.
- Donor hearts are scarce. Being referred early — before a crisis — gives you the best chance to be evaluated and listed in time.
- An LVAD (heart pump) can keep you stable and stronger while you wait. This is called bridge-to-transplant.
- Life after transplant takes work: daily medicines, regular check-ups, and care to prevent infection. But for most, the trade is worth it.

The Four Steps of the Transplant Journey

Step 1: Evaluation	Step 2: Waiting List	Step 3: Transplant	Step 4: Life After
• A team runs tests, including right heart cath	• Listed nationally with UNOS	• Come in right away when a heart is found	• Anti-rejection medicines for life
• Checks if a new heart can help you	• Sickest patients offered hearts first	• Surgery takes several hours	• Regular check-ups and biopsies
• Looks for anything that must be fixed first	• Matched by blood type and body size	• A heart-lung machine supports you	• Watch for infection and artery disease
• Reviews your support at home	• An LVAD can bridge the wait	• The donor heart replaces the old one	• Most people feel far better

Risk Factors

Some patients are more likely to develop this condition. Knowing your risk helps your care team take extra precautions.

Risk Factor	Why It Increases Risk
Severe heart failure despite all therapy	The main reason for transplant: symptoms persist even on the best medicines, devices (ICD/CRT), and sometimes a heart pump.
Very low pumping strength (EF)	The ejection fraction is often 20% or lower. The heart cannot move enough blood to meet the body's needs.
Repeated hospital stays or IV heart medicines	Needing the hospital again and again, or needing IV drip medicines (inotropes) to stay stable, signals end-stage disease.
Active infection (a barrier until treated)	An untreated infection must be cleared first. Anti-rejection medicines lower defenses, so infection must be controlled before surgery.
Severe lung artery pressure (fixed)	Very high, fixed pressure in the lung arteries can make a standard transplant unsafe. This is checked by right heart catheterization. See our Right Heart Cath guide.
Active cancer or other major organ failure	Active cancer, or severe kidney, liver, or lung disease, may rule out transplant or call for a combined transplant in select centers.
Unable to follow the lifelong plan	Transplant needs daily medicines and frequent visits for life. A lack of support or untreated substance use can be a barrier until addressed.
Frailty or very advanced age	There is no strict age cutoff, but frailty and other illnesses are weighed. Many centers list carefully selected patients into their 60s and early 70s.

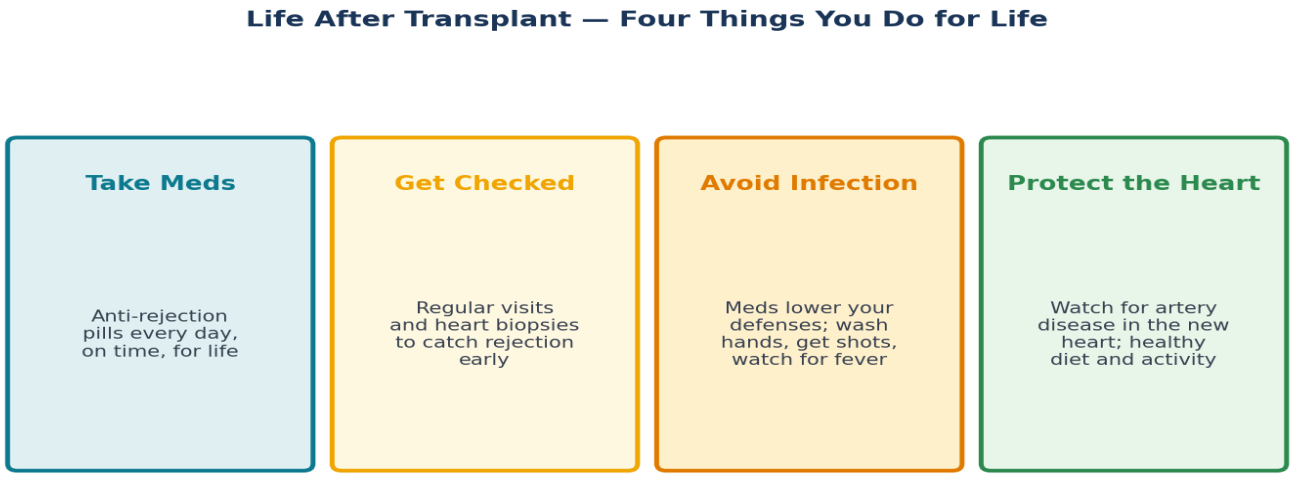
The Transplant Evaluation — Common Tests and Why They Are Done

Test	What It Checks	Why It Matters
Right heart catheterization	Pressure in the lungs and heart.	Shows if a standard transplant is safe. High, fixed lung pressure can be a barrier.

Test	What It Checks	Why It Matters
Blood tests and tissue typing	Blood type, antibodies, organ function.	Used to match you with a safe donor heart and check your other organs.
Echocardiogram and heart imaging	Pumping strength and structure.	Confirms how weak the heart is and looks for other problems.
Cardiopulmonary exercise test	How well the heart and lungs handle effort.	Helps judge how severe the heart failure is and the urgency.
Cancer and infection screening	Hidden cancer or infection.	These must be cleared first, because anti-rejection medicines lower your defenses.
Team and support review	Your support system and ability to follow the plan.	Lifelong medicines and visits need a strong support plan to succeed.

Treatment Options

- **Step 1 — Referral and evaluation.** Your cardiologist refers you to a transplant center. A team runs tests to see if a new heart can help and if your body can handle the surgery and the medicines.
- **Step 2 — The waiting list.** If approved, you are listed with UNOS (the national network). You are matched by blood type, body size, and how sick you are. The sickest patients are offered hearts first.
- **Step 3 — An LVAD (heart pump) if needed.** If your heart is too weak to wait safely, a pump can bridge you. It shares the heart's work and keeps you stronger until a donor heart comes. See our Heart Failure (HFrEF) guide.
- **Step 4 — The surgery.** When a matched heart is found, you go to the hospital right away. A heart-lung machine keeps blood flowing while surgeons remove the old heart and sew in the new one. It takes several hours.
- **Step 5 — Anti-rejection medicines for life.** Starting right after surgery, you take medicines that stop your body from attacking the new heart. You never stop these without your team.
- **Step 6 — Regular check-ups and biopsies.** In the first year you have frequent visits and heart biopsies to catch rejection early. Check-ups get less frequent over time but never stop.
- **Shared decisions matter.** Transplant is one path among several. Your team reviews the benefits, the risks, and your goals with you and your family before listing you.



After transplant, four habits protect your new heart for life: take anti-rejection medicines on time, go to every check-up and biopsy, prevent infection, and protect the new heart from artery disease with a healthy lifestyle.

After Transplant — Medicines and Monitoring at a Glance

What	Why	How Often
Anti-rejection medicines	Stop the body from attacking the new heart.	Every day, for life — never stop on your own.
Clinic visits and blood tests	Check medicine levels, organ function, and rejection.	Often at first, then less over time, but for life.
Heart biopsies	Take a tiny tissue sample to catch rejection early.	Frequent in year one, then fewer.
Infection-prevention medicines	Lower the risk of infections while defenses are down.	Daily for the first months after surgery.
Coronary angiogram / imaging	Watch for artery disease in the new heart.	Usually once a year.
Cancer and skin screening	Catch skin cancer and other cancers early.	Regular checks; protect skin from the sun.

The Evaluation: Are You a Candidate?

- **Why it is done:** the team checks two things — can a new heart help you, and can your body handle the surgery and the lifelong medicines.
- **The team:** heart failure doctors, transplant surgeons, nurses, a pharmacist, a social worker, a dietitian, and a financial counselor all take part. Transplant is a team effort.
- **Right heart catheterization:** a thin tube goes through a vein to measure the pressure in your lungs and heart. Very high, fixed lung pressure can make a standard transplant unsafe, so this test is key. See our Right Heart Cath guide.
- **Other tests:** blood tests and tissue typing (to match a donor), heart imaging, an exercise test, and screening for hidden cancer or infection.
- **What can rule it out:** active cancer, active infection, severe damage to other organs, very high fixed lung pressure, or being unable to follow the lifelong plan. Some of these can be fixed first, then you are re-checked.
- **Support review:** the team makes sure you have help at home and a plan to take medicines and get to visits. A strong support system is part of being ready.
- **The decision:** the whole team meets and decides together whether to list you. They explain the reasons either way.

The Waiting List: How a Heart Is Matched

- **Getting listed:** if approved, you join the national waiting list run by UNOS. Your information goes into a shared, fair matching system.
- **Sickest first:** donor hearts are offered to the sickest patients first. The system uses six status levels — Status 1 is the most urgent, Status 6 the least. Your status can change as your health changes.
- **Matching:** a donor heart must match your blood type and body size, and the distance must be short enough for the heart to stay healthy during travel.
- **How long:** waits vary widely — from weeks to a few years. Blood type, body size, urgency, and donor supply all matter. Under the current rules, the sickest patients often wait less.
- **An LVAD as a bridge:** if your heart is too weak to wait safely, a heart pump can keep you stable and stronger until a heart comes. See our Cardiogenic Shock guide for the sickest situations.
- **Be ready:** keep your phone on, stay close enough to your center, and keep a hospital bag packed. When a heart is found, you must come in right away.
- **Stay as healthy as you can:** follow your medicines, diet, and activity plan. Staying strong helps you do well in surgery and recovery.

Life After Transplant: Protecting Your New Heart

- **Anti-rejection medicines for life:** these stop your body from attacking the new heart. Take them on time, every day. Never skip or stop without your team. This is the most important thing you do.
- **Check-ups and biopsies:** visits and heart biopsies are frequent in the first year to catch rejection early, then they space out over time but never fully stop.
- **Watch for rejection:** tiredness, shortness of breath, swelling, or fast weight gain can be early signs. Call your team — caught early, rejection is usually treatable.
- **Higher infection risk:** your medicines lower your defenses. Wash your hands, avoid sick people, get recommended shots, and call for any fever over 100.4 F.
- **Artery disease in the new heart:** a special narrowing can develop over years. The new heart may not feel chest pain in the usual way, so yearly testing watches for it.
- **Diet and lifestyle:** eat heart-healthy, stay active (cardiac rehab helps), avoid grapefruit, do not smoke, and protect your skin from the sun.
- **Living well:** most people return to walking, working, traveling, and activities they enjoy. With good care, many live well for well over a decade.
- See our Left Ventricular Dysfunction guide to understand the weak heart that led to transplant.

Comfort Measures at Home (No Medication Needed)

These simple steps support healing and ease symptoms. Use them alongside any medication your doctor prescribes.

- Take every anti-rejection dose on time, exactly as prescribed. Use a pillbox, alarms, and a backup supply. Never skip or stop on your own.
- Wash your hands often. Stay away from people who are sick. Get the shots your team recommends (your team avoids 'live' vaccines).
- Eat heart-healthy: more vegetables and fruit, less salt and saturated fat. Avoid grapefruit and grapefruit juice — they change your medicine levels.
- Handle food safely. Wash produce, cook meat fully, and avoid raw or undercooked foods that can carry germs.
- Stay active as your team allows. Cardiac rehab helps you rebuild strength safely after surgery.
- Protect your skin from the sun and get regular skin checks. Anti-rejection medicines raise the risk of skin cancer.
- Keep an up-to-date medicine list. Show it to every doctor, dentist, and pharmacist. Many medicines interact with anti-rejection drugs.
- Go to every follow-up visit and biopsy. They catch rejection and artery problems early, when they are most treatable.
- Do not smoke and avoid alcohol or use only as your team allows. Both can harm the new heart and your other organs.
- Ask for help with mood. Anxiety and depression are common after transplant. Support groups and counseling help many people.

Risks, Benefits, and Alternatives

Every choice has trade-offs. Use this table to start the shared decision conversation.

Option	Risks	Benefits	Alternatives
Heart Transplant	Major open-heart surgery. Rejection can happen, even years later. Lifelong anti-rejection medicine raises infection and cancer risk. The wait for a donor heart can be months to years. Artery disease can develop in the new heart over time.	Best long-term option for end-stage heart failure. Over 85% alive at 1 year; median survival over 12 years. Most people feel far better and return to many normal activities.	LVAD (heart pump) as a bridge or long-term pump. Home IV heart medicines. Palliative care for comfort. See our Advanced Heart Failure guide.
LVAD as a Bridge	Open-heart surgery to place the pump. Stroke and bleeding risk. A driveline cable exits the skin and needs daily care. Blood thinner needed. Infection risk at the driveline site.	Keeps you alive and stronger while you wait. Improves symptoms and activity. Can make you a better transplant candidate. About 79% survival at 2 years with the newest pump (MOMENTUM 3).	Transplant when a heart is available. LVAD as a long-term pump if transplant is not possible. Inotropes or palliative care.
Right Heart Catheterization (part of the evaluation)	A thin tube goes through a vein to the heart. Small risks: bruising, bleeding, infection, or rhythm changes. Usually very safe.	Measures the pressure in your lungs and heart. This is a key test to see if a standard transplant is safe for you. Helps the team plan.	Echo and other imaging give related information. But the catheter gives the most exact pressures. See our Right Heart Cath guide.

Option	Risks	Benefits	Alternatives
Staying on Medicines and Devices Only	End-stage heart failure keeps worsening without advanced therapy. Symptoms and hospital stays usually increase over time.	Avoids major surgery and lifelong anti-rejection medicine. Can be the right choice when transplant is not wanted or not possible. Palliative care improves comfort and quality of life.	Heart transplant or LVAD if you become a candidate and choose them. Home inotropes. Palliative care and hospice for comfort goals.

Common Misconceptions

Myth	Reality
A heart transplant cures heart failure.	Not exactly. It replaces the failing heart with a healthy one. But the new heart needs lifelong anti-rejection medicine and regular check-ups. It trades one problem for one that is easier to manage.
I am too old for a transplant.	There is no strict age cutoff. Health and fitness matter more than a number. Carefully chosen patients in their 60s and early 70s receive transplants.
Once I get a new heart, I am done with doctors.	The opposite is true. The first year has frequent visits and biopsies. Check-ups get less frequent over time but continue for life.
Rejection means the transplant has failed.	Not usually. Mild rejection is common and is treated by adjusting your medicines. That is why check-ups and biopsies matter so much.
The donor's personality comes with the heart.	No. A transplant moves the heart muscle and its blood vessels only. It does not transfer memories, traits, or personality.
I will be on a waiting list for just a few weeks.	Wait times vary a lot — from weeks to a few years. They depend on your blood type, your body size, how sick you are, and donor supply.
An LVAD means transplant has been ruled out.	No. An LVAD is often a bridge that keeps you stable and stronger while you wait. It can make you a better transplant candidate.
Anti-rejection medicines are only needed for the first year.	False. They are needed for the life of the transplant. Stopping them lets the body attack and damage the new heart.

Cross-links to companion guides: Advanced Heart Failure — Heart Failure (HFrEF) — Cardiogenic Shock — Right Heart Cath — Left Ventricular Dysfunction

Possible Complications

Knowing what can go wrong helps you spot problems early. Most complications are uncommon, especially with treatment.

Where / What	What Can Happen
Rejection (acute)	The body's defenses attack the new heart. It is most common in the first year. Biopsies catch it early. It is treated by adjusting anti-rejection medicines.
Infection	Anti-rejection medicines lower your defenses. Bacterial, viral, and fungal infections are more likely, especially early on. Prevention medicines and hand-washing help a lot.
Cardiac allograft vasculopathy (artery disease in the new heart)	A special kind of artery narrowing that can develop in the donor heart over years. Because the new heart has no normal pain nerves, it may be silent. Yearly testing watches for it.
Side effects of anti-rejection medicines	These can include high blood pressure, kidney strain, diabetes, high cholesterol, and tremor. Your team adjusts doses and adds treatment to manage them.
Higher cancer risk	Long-term immune suppression raises the risk of some cancers, especially skin cancer and lymphoma. Sun protection and regular screening are important.
Chronic rejection	Slow, long-term injury to the new heart. It is watched for at every check-up. Vasculopathy is one form of it.
Surgical and early problems	Bleeding, blood clots, stroke, kidney injury, or early weakness of the new heart can happen around the time of surgery and are managed in the hospital.
Emotional strain	Waiting, surgery, and lifelong care are stressful for patients and caregivers. Counseling and support groups are part of good care.

Points to Know

If you remember nothing else, remember these key points.

- A transplant replaces a failing heart with a healthy donor heart. It is for end-stage heart failure when other treatments are not enough.
- The journey has four steps: evaluation, the waiting list, the surgery, and life after.
- On the waiting list, the sickest patients are offered donor hearts first. An LVAD (heart pump) can bridge you while you wait.
- Outcomes are good: over 85% alive at 1 year, median survival over 12 years, and most people feel far better.
- Anti-rejection medicines are for life. Taking them exactly as prescribed is the single most important thing you can do.
- Regular check-ups and heart biopsies catch rejection and artery problems early, when they respond best to treatment.
- Infection risk is higher. Wash your hands, get recommended shots, and call your team for any fever.
- Early referral — before a crisis — gives you the best chance to be evaluated and listed in time.

When to Call Us - and When to Call 911

If you are not sure, call. We would rather hear from you twice than miss a real problem.

- Fever over 100.4 F, chills, or shaking — anti-rejection medicines hide infection, so call your transplant team right away.
- New shortness of breath, swelling, fast weight gain, or unusual tiredness — these can be early signs of rejection.
- Less ability to exercise, or feeling your heart race or skip — tell your team.
- Redness, drainage, or pain at any surgery or driveline site (if you have an LVAD).
- Cough, sore throat, diarrhea, or burning when you urinate — possible infection; call before it worsens.
- You miss, vomit up, or run out of an anti-rejection dose — call the same day for instructions.
- Chest pain or pressure — call 911. The new heart may not give the usual warning pain, so take any new symptom seriously.
- Sudden weakness, trouble speaking, or vision change (stroke signs) — call 911.
- A new medicine, supplement, or grapefruit in your diet — check first; many things change anti-rejection medicine levels.
- Feeling very low, hopeless, or overwhelmed — reach out. Mood support is part of your care.

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Trusted Resources

The links below are the trusted resources Dr. Ali used to write this guide and that he recommends you visit for more information. Each is a clickable link in the digital version and a Short.io tracked URL on the printed version.

- UNOS — Heart Transplant - The national transplant network: how the waitlist, matching, and donation work.
- OPTN — Heart Transplant (Patients) - Official patient pages on the heart waiting list and the status system.
- Cleveland Clinic — Heart Transplant - Detailed patient guide to evaluation, surgery, and life after transplant.
- Mayo Clinic — Heart Transplant - Patient guide to candidacy, the procedure, and anti-rejection medicine.
- AHA — Heart Transplant - American Heart Association overview of when transplant is considered.
- NIH/MedlinePlus — Heart Transplantation - Official NIH patient page with plain-language information and links.
- ISHLT — International Society for Heart and Lung Transplantation - Professional society behind listing criteria and survival statistics.
- Donate Life America — Organ Donation - How organ donation works and how to register as a donor.

Sources Used to Build This Guide

Every recommendation in this guide is grounded in one or more of the studies, guidelines, or trusted resources below. Short links are tracked so Dr. Ali can see which references patients are reading; nothing personally identifying is captured.

- Cleveland Clinic — Heart Transplant *[Patient-Education]*
  Evaluation, surgery, and life after transplant
- AHA — Heart Transplant *[Patient-Education]*
  When transplant is considered in heart failure
- Mayo Clinic — Heart Transplant *[Patient-Education]*
  Candidacy, procedure, and immunosuppression
- ISHLT — Listing Criteria for Heart Transplantation (2016 Update) *[Guideline]*
  Professional society guidance on transplant candidacy and contraindications
- UNOS — Heart Transplant Process and Waitlist *[Patient-Education]*
  National waitlist, donor matching, and the status system
- OPTN — Heart Transplant (Patients by Organ) *[Patient-Education]*
  Six-status sickest-first allocation and how matching works
- 2022 AHA/ACC/HFSA Heart Failure Guideline — Advanced HF section *[Guideline]*
  When to refer for transplant or mechanical support in advanced HF
- Impact of the 2018 UNOS Heart Transplant Policy Changes (JACC: Heart Failure) *[Journal]*
  Six-tier status system, shorter median waitlist time, waitlist mortality by status
- MOMENTUM 3 Trial — HeartMate 3 LVAD (NEJM) *[Journal]*
  LVAD bridge-to-transplant 2-year survival data
- NIH/MedlinePlus — Heart Transplantation *[Patient-Education]*
  Plain-language overview and post-transplant care
- Cleveland Clinic — Left Ventricular Assist Device (LVAD) *[Patient-Education]*
  LVAD as a bridge while waiting for a donor heart
- ISHLT — Heart Transplant Registry (Survival Statistics) *[Registry]*
  One-year survival and median survival after transplant

About This Guide

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Reviewer note: Reviewed against Cleveland Clinic, Mayo Clinic, and AHA heart-transplant pages. This guide adds a four-step journey diagram, an LVAD-bridge concept figure, a plain-language evaluation-tests table, a six-status waiting-list explainer, and an after-transplant medicine-and-monitoring table not found together elsewhere.

Disclaimer

This guide is for educational purposes only and does not replace medical advice from your physician. Recommendations may not apply to every patient. Always follow the specific instructions of Dr. Ali and your care team. In an emergency call 911 or go to the nearest emergency department.

Take This Guide With You

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