LEADING MEDICINE:
A TOWN HALL CONVERSATION
WITH DR. MARC BOOM

Town Hall Conversation XXXIX

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Genetics of Heart Failure

Cindy M. Martin, MD

September 28, 2023

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Burden of Heart Failure

- About 6.5 million Americans over the age of 20 and more than 26 million people worldwide have heart failure
- More than 960,000 new cases per year in US
- At 40 years of age, the lifetime risk of developing HF for both men and women is 1 in 5
- Prevalence projected to increase by 48% and direct medical costs to reach $53 billion by 2030
- **About half** of people who develop heart failure **die within 5 years** of diagnosis

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Universal Definition and Classification of Heart Failure (HF)

Definition

HF is a *clinical syndrome* with current or prior

- ***Symptoms and or signs caused by a structural and/or functional cardiac***

And corroborated by at least one of the following:

- ***Elevated natriuretic peptide levels***
- ***Objective evidence of cardiogenic pulmonary or systemic congestion***

Stages

AT RISK *(STAGE A)*	**Patients at risk for HF, but without current or prior symptoms or signs of HF and without structural cardiac changes or elevated biomarkers of heart disease**
PRE-HF *(STAGE B)*	**Patients without current or prior symptoms or signs of HF with evidence of one of the following:** • *Structural Heart Disease* • *Abnormal cardiac function* • *Elevated natriuretic peptide or cardiac troponin levels*
HF *(STAGE C)*	**Patients with current or prior symptoms and/or signs of HF caused by a structural and/or functional cardiac abnormality**
ADVANCED HF *(STAGE D)*	**Severe symptoms and/or signs of HF at rest, recurrent hospitalizations despite GDMT, refractory or intolerant to GDMT, requiring advanced therapies transplantation, mechanical circulatory support, or palliative care**

Classification By EF

HF with reduced EF (HFrEF)
- *HF with **LVEF < 40%***

HF with mildly reduced EF (HFmrEF)
- *HF with **LVEF 41-49%***

HF with preserved EF (HFpEF)
- *HF with **LVEF > 50%***

HF with improved EF (HFimpEF)
- *HF with a baseline LVEF of < 40%, a 10-point increase from baseline LVEF, and a second measurement of LVEF of > 40%*

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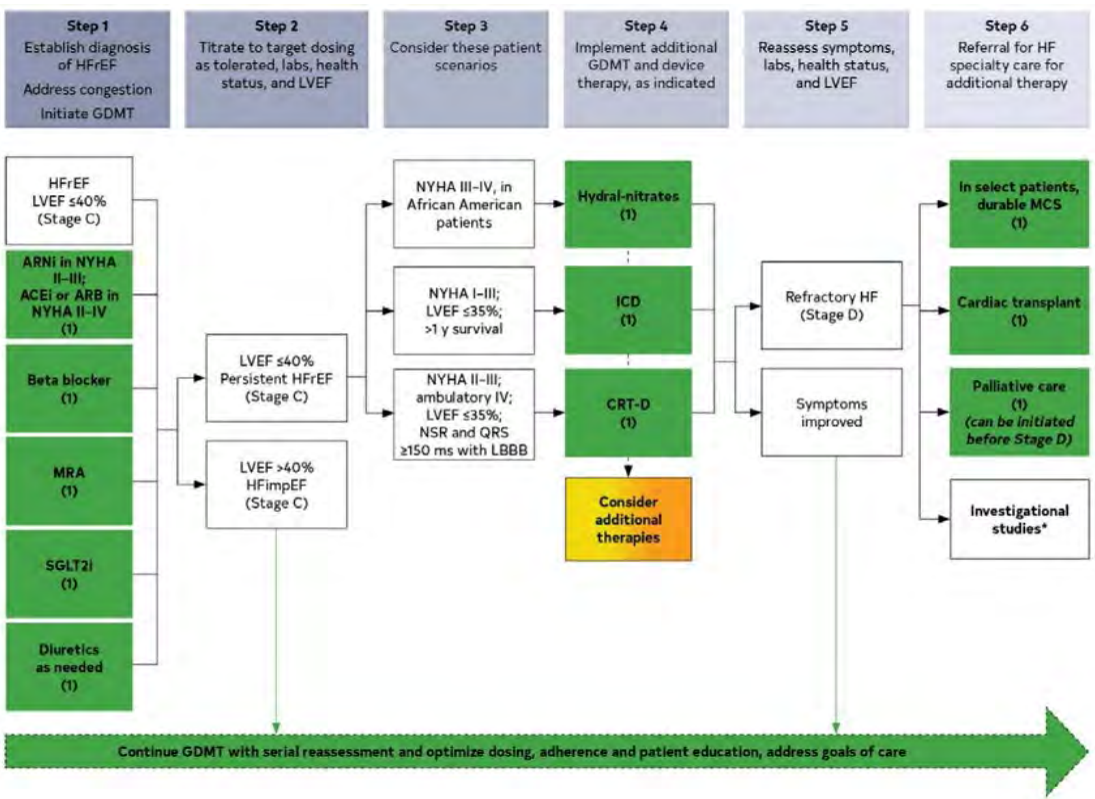
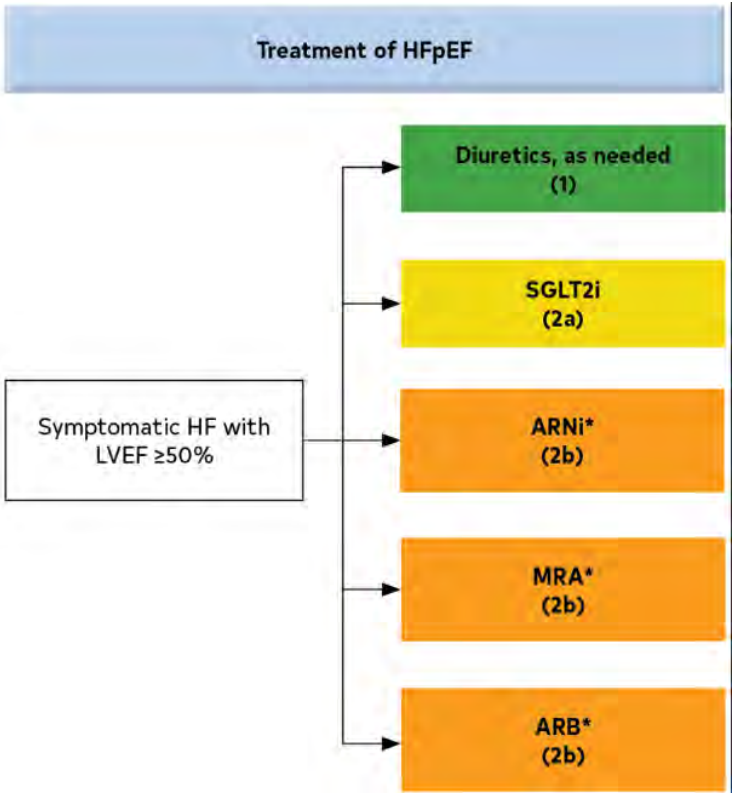
ACC/AHA HF Treatment Guidelines





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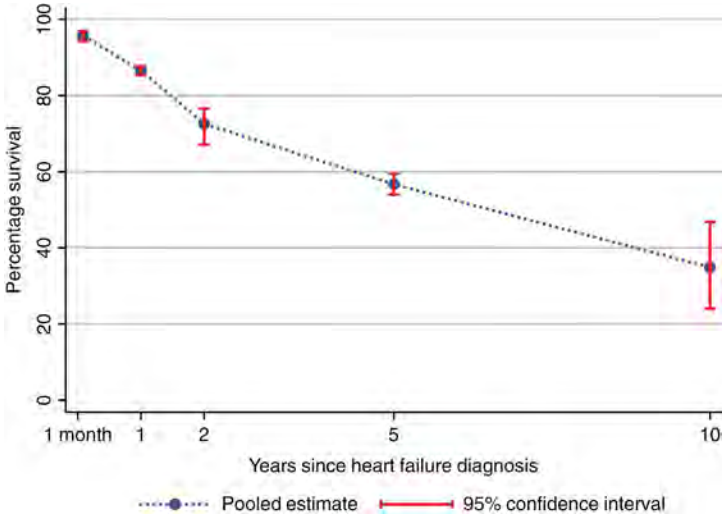
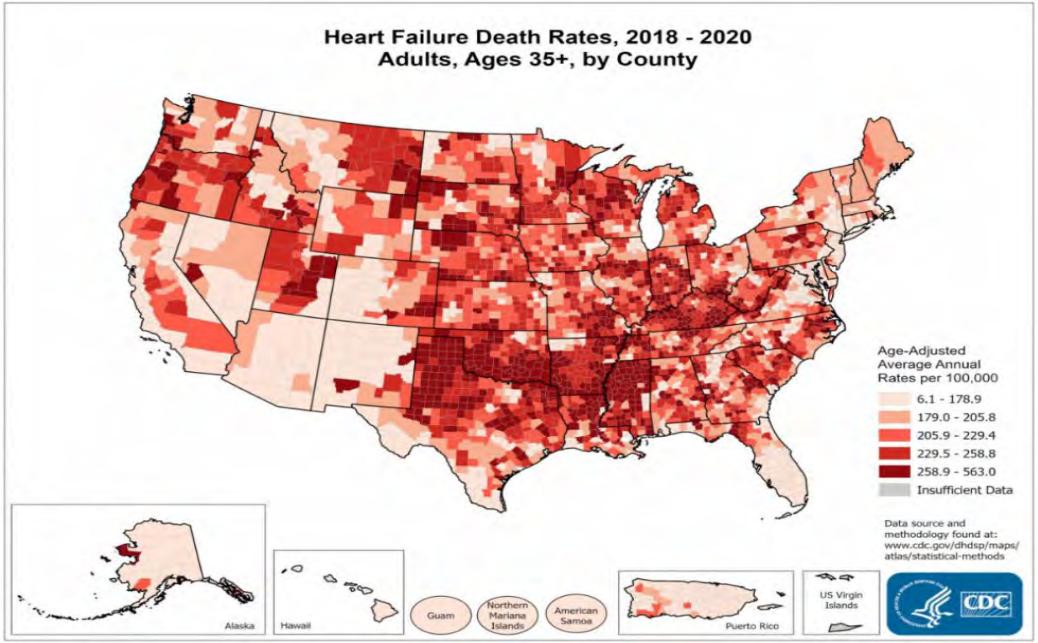
Mortality of All-Cause Heart Failure





European J of Heart Fail, Volume: 21, Issue: 11, Pages: 1306-1325, First published: 16 September 2019, DOI: (10.1002/ejhf.1594)

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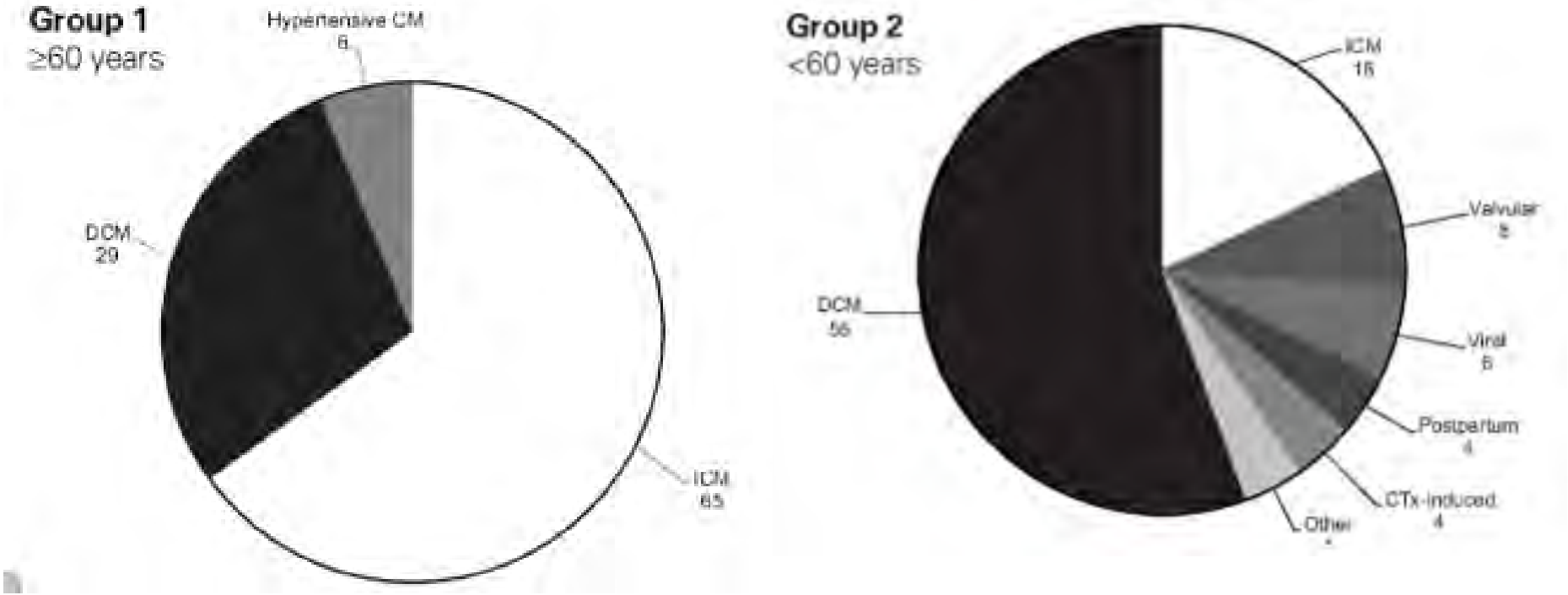
Etiology of Heart Failure



Cause of heart failure by age group, expressed as percentages. CM = cardiomyopathy; CTx = chemotherapy; DCM = dilated cardiomyopathy; ICM = ischemic cardiomyopathy

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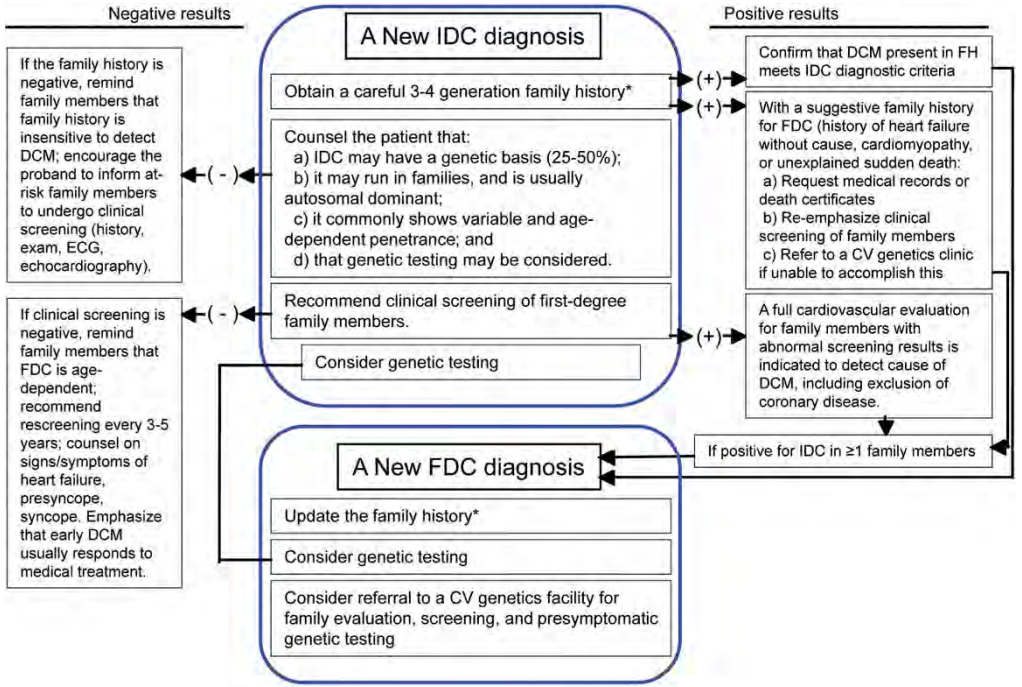
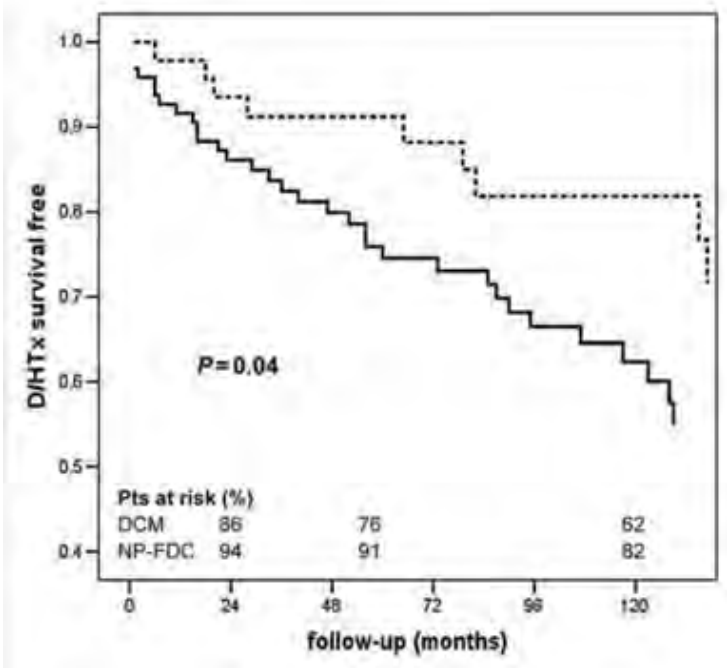
Improved Outcome With Familial Screening for DCM



R. Hershberger & j. Siegfried. *JACC,* 2011; 57:1641-9



M. Moretti, et al. *European Journal of Heart Failure,* 2010;12(9):922-927

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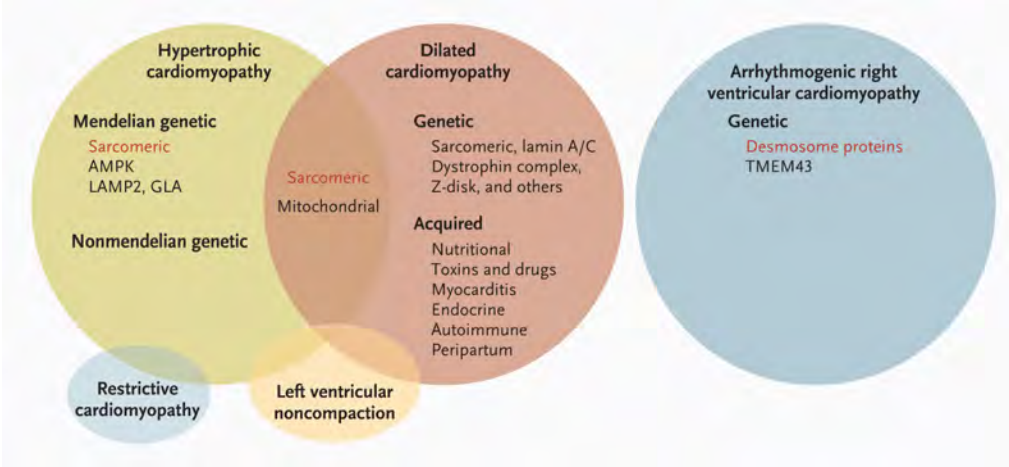
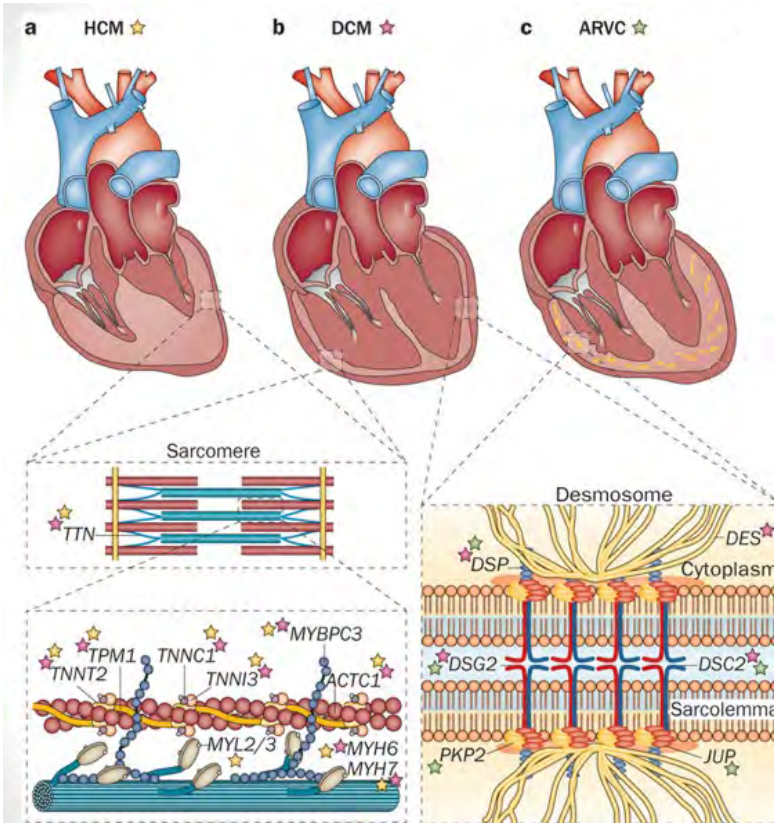
Inherited/Genetic Cardiomyopathies



H. Watkins, et al. *NEJM,* 2011; 364:1643-56



M. Moretti, et al. *European Journal of Heart Failure,* 2010;12(9):922-927

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Inherited/Genetic Cardiomyopathies

- Estimated that these heritable cardiomyopathies affect as many as 1 in 390 adults
- May still be an underestimate of the true impact of these diseases given their incomplete penetrance and variable expressivity including differences in disease severity and age of onset

Hypertrophic Cardiomyopathy

- Incidence 1:500
- Most common cause of sudden death in the young
- About 50% of adult patients have at least 1 relative with HCM or SCD
- Varied clinical course and findings due in part to incomplete penetrance/variable expressivity
- At least 25 genes
    - >1400 mutations
- Identify mutations in up to 50-70% of patients
- Patients with >1 mutation (5%) have more severe disease
- Mutations in sarcomere (60-70%)
    - MYH7 and MYBPC3 most common (25-33% each)

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Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC)

- 1:1000-5000
- Male 1.6 : Female 1
- 20% of SCD in people <35 yrs attributed to ARVC
- Myocytes die and are replaced by fat and fibrous tissue → arrhythmias
  - RV becomes thin and stretched; LV can also be affected (50%)
  - Electrical impulses are interrupted or altered
- Up to 12 genes identified; >300 pathogenic mutations
- Incomplete penetrance/variable expressivity (15%)
- 40-60% detection (with high clinical suspicion)
- Common molecular causes:
  - Defects in desmosomal proteins (intracellular structures that anchor intermediate filaments to the cytoplasmic membrane in adjoining cells)
    - DSP, PKP2, DSG2, DSC2, and JUP
  - 2 other genes encode proteins that maintain calcium homeostasis
    - RYR2 and TMEM43

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Dilated Cardiomyopathy

- Incidence 1:2500
- LV becomes dilated or stretched and heart muscle becomes weak and/or floppy. Unable to pump efficiently
- 20-50% familial
- Incomplete penetrance/variable expressivity
- >40 genes identified
  - varied function
  - overlap with HCM
- 30-50% detection
- DCM Genes
  - TTN = 25%
  - MYH7 = 10%
  - TNNT2 = 4%
  - LMNA/C = 7-8%
  - Muscular Dystrophy Genes

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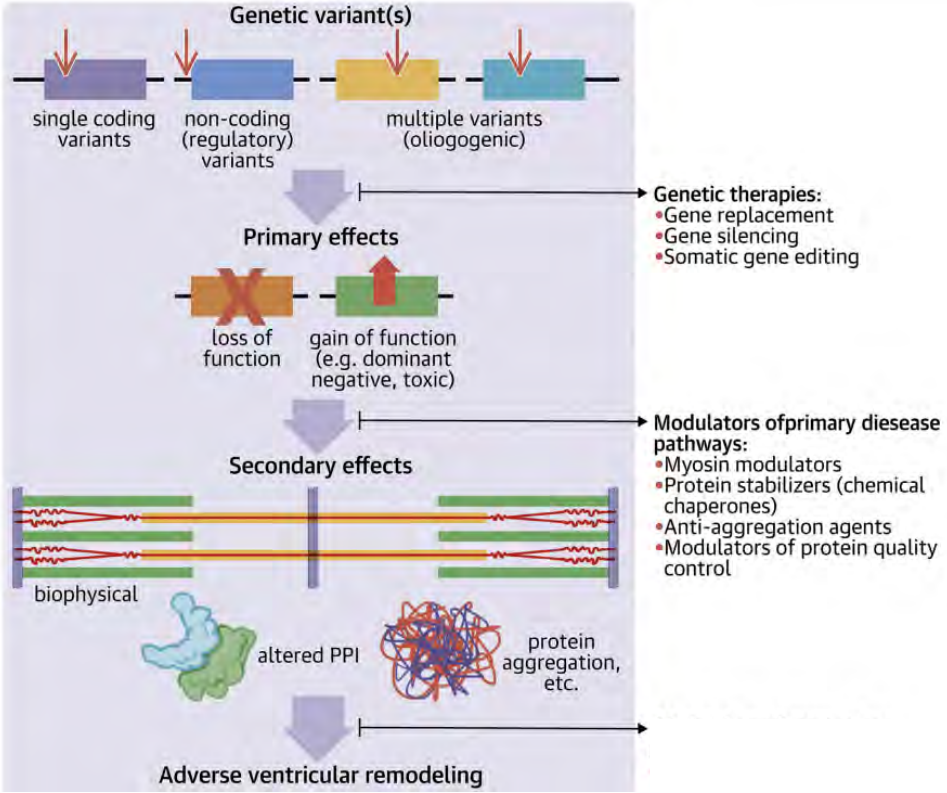
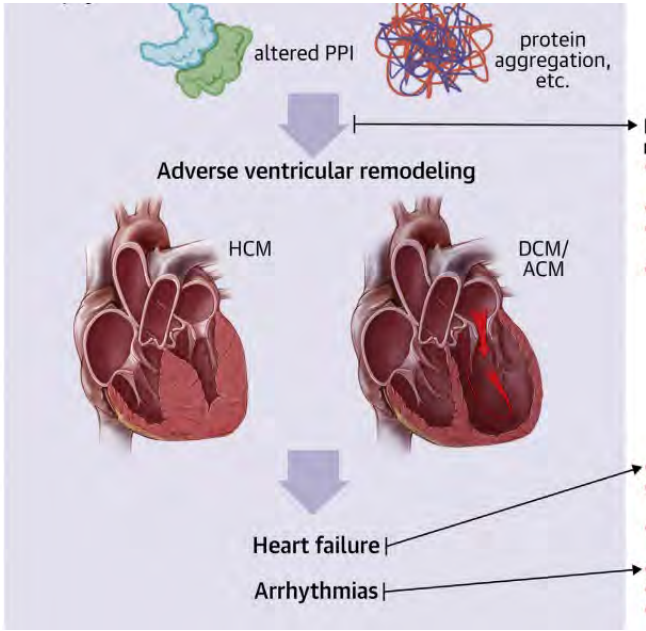
Existing and Emerging Therapies for Genetic Cardiomyopathies





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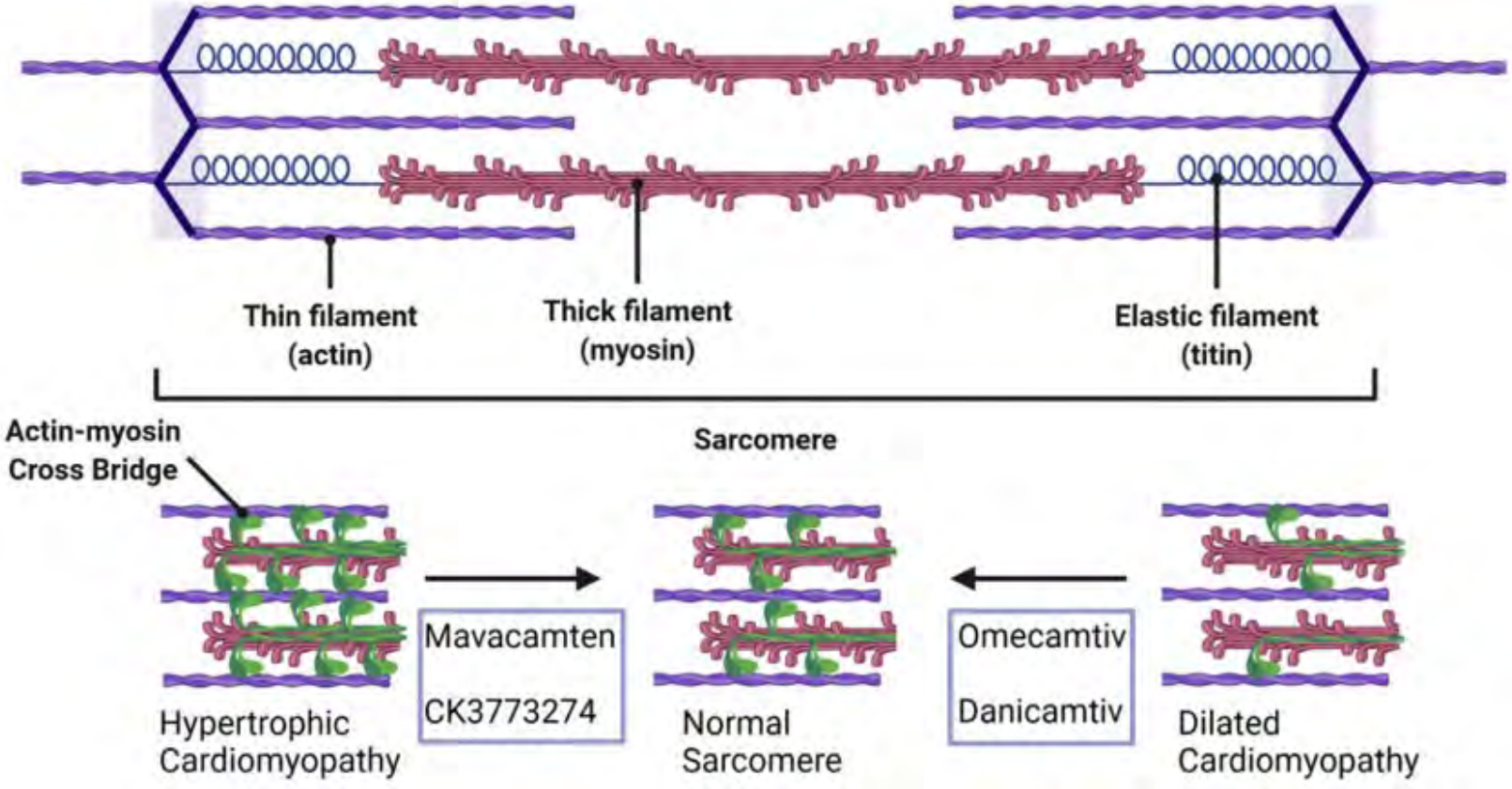
Helms, A.S. et al. J Am Coll Cardiol Basic Trans Science. 2022;7(1):70-83.

Myosin Modulators



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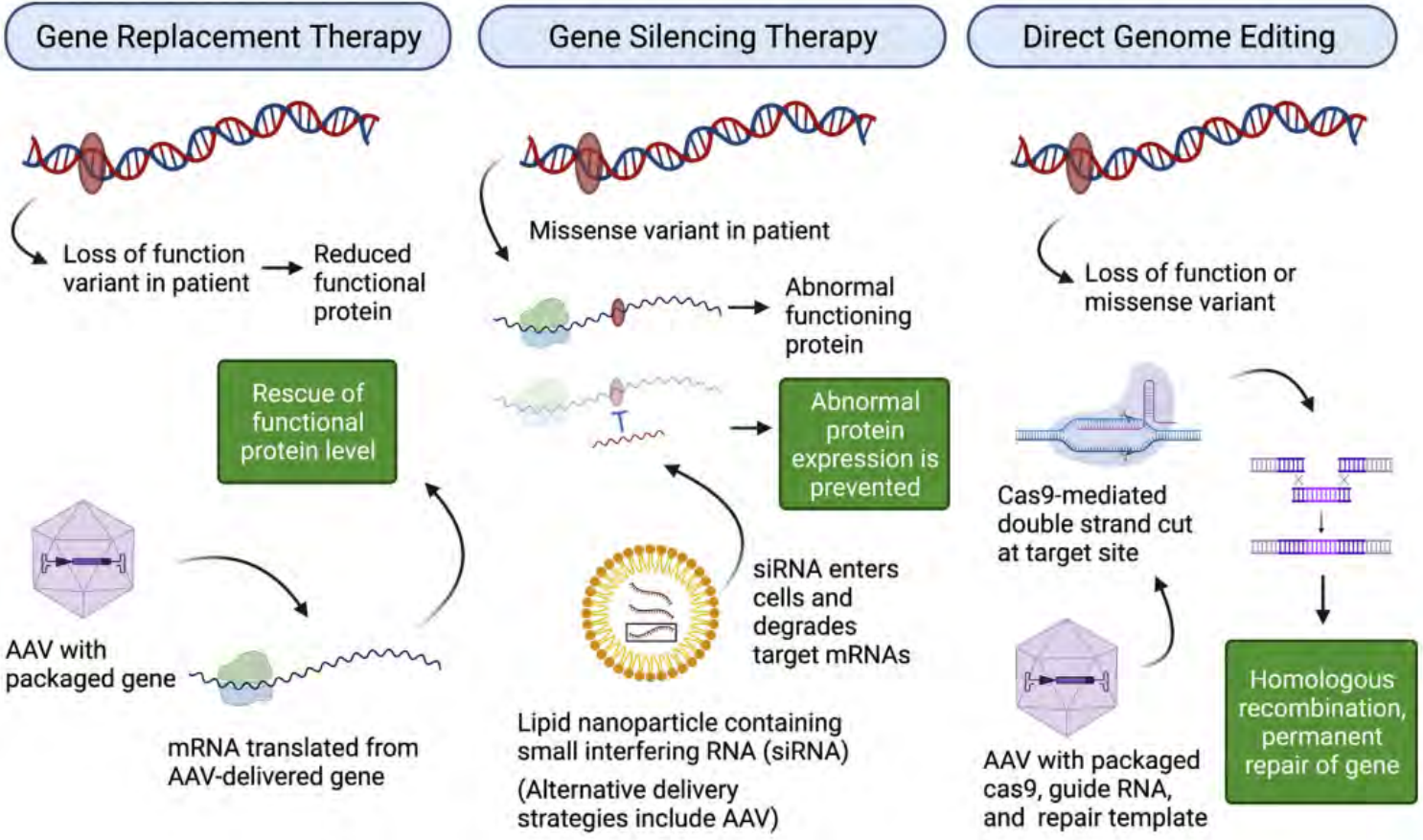
Helms, A.S. et al. J Am Coll Cardiol Basic Trans Science. 2022;7(1):70-83.

Gene Therapy



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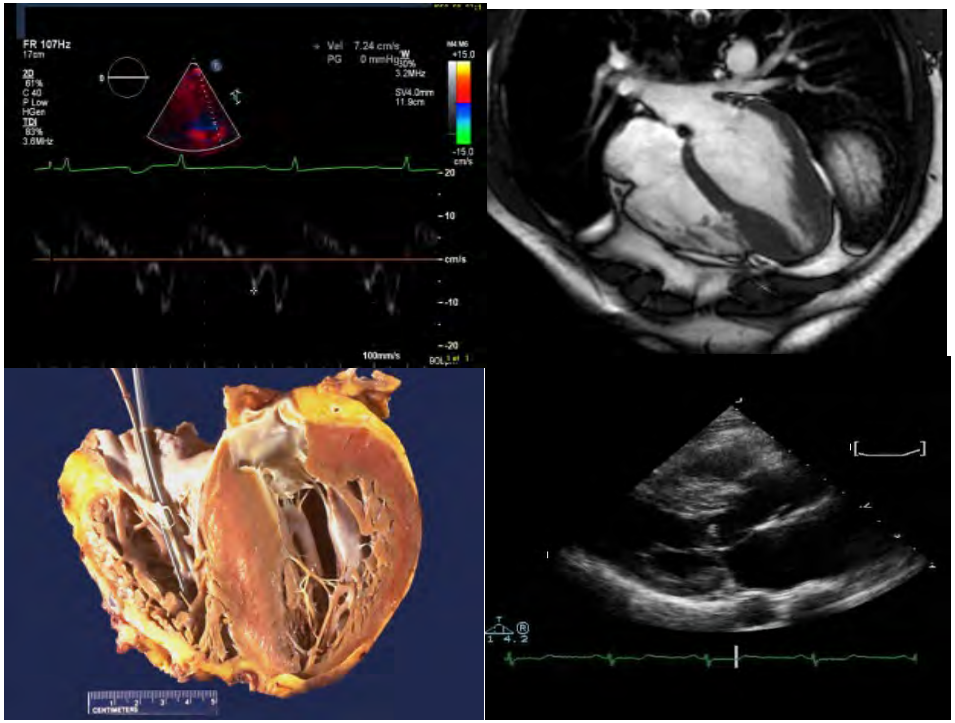
Cardiovascular Genetics Clinic



- Dedicated clinic for wide array of cardiovascular genetic conditions
  - Inherited cardiomyopathies
  - Inherited arrythmias
  - Familial cholesterol disorders/dyslipidemias
    - Aortopathies
- Multi-disciplinary clinic comprised of specialized physician teams
- Dedicated genetic counselor

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THANK YOU!
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Methodist
Methodist
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Atrial fibrillation
Novel treatments and...
(almost) everything you want to know

Miguel Valderrábano

Division of Cardiac Electrophysiology, Department of Cardiology,
Houston Methodist DeBakey Heart & Vascular Center,
Houston Methodist Hospital

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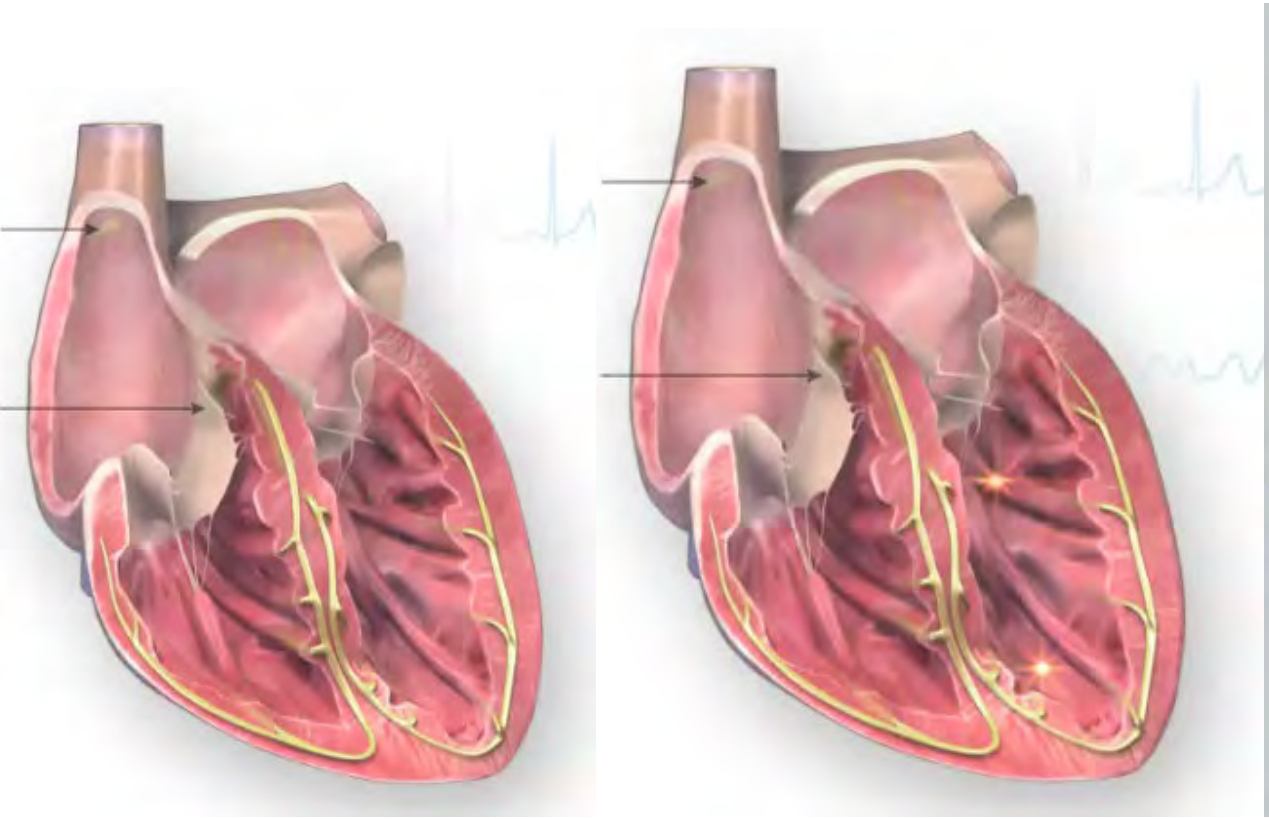
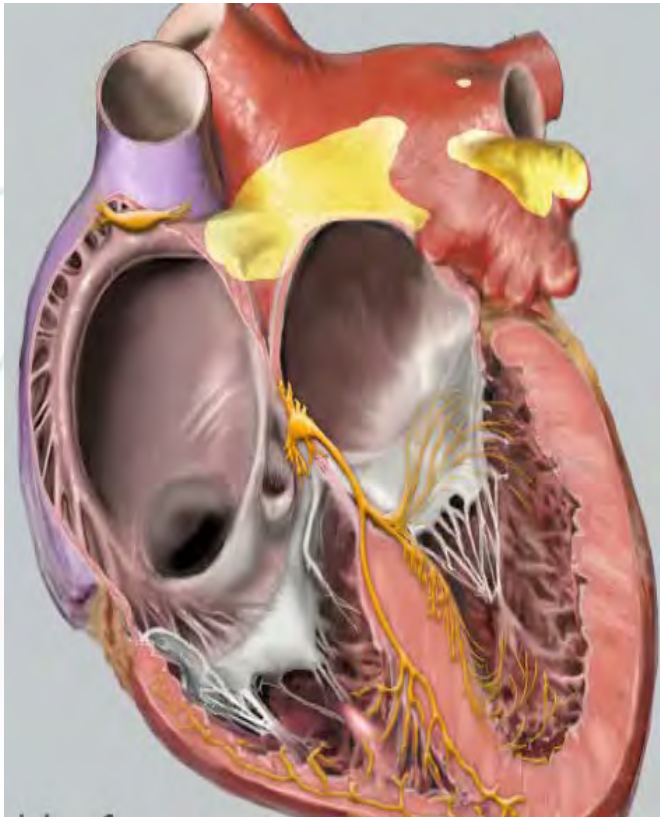
What is fibrillation?





Left Atrial Appendage
Atrial Fibrillation and Thrombus Formation: Stroke

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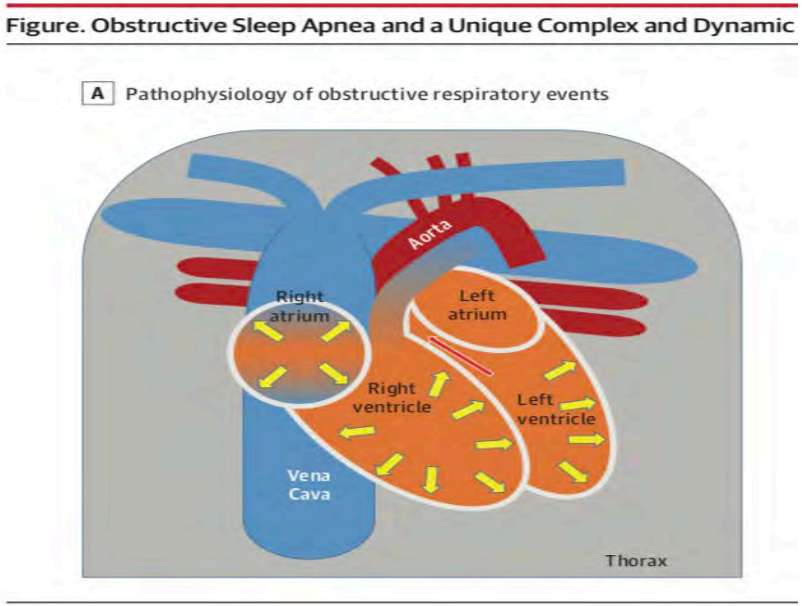
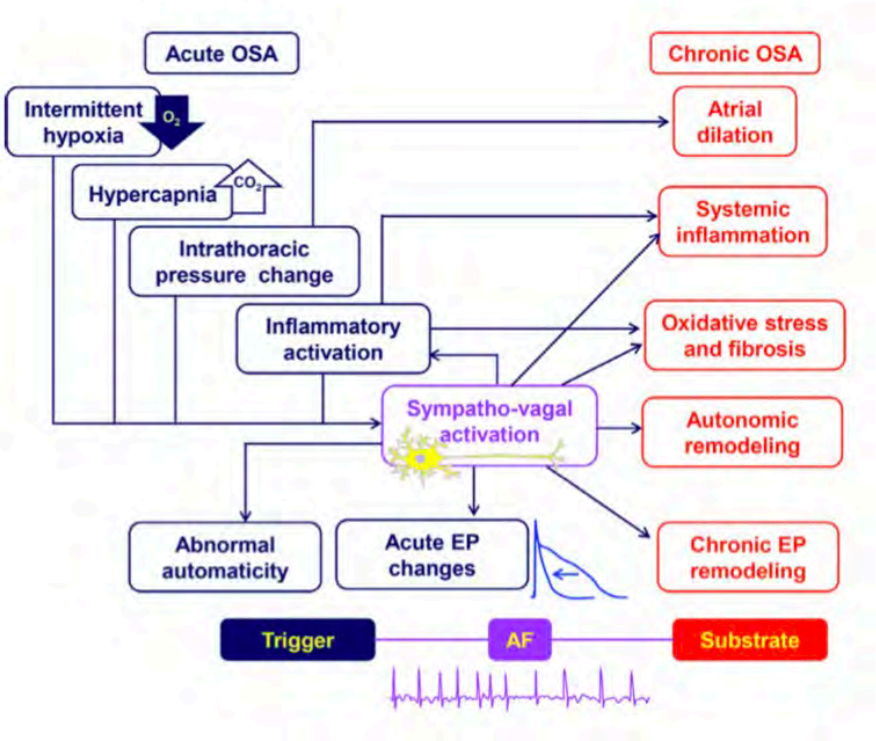
AF associations: sleep apnea





Apnea increases AF risk. However,
Apnea treatment does NOT resolve AF

JAMA Cardiol. 2018;3(6):532-540.

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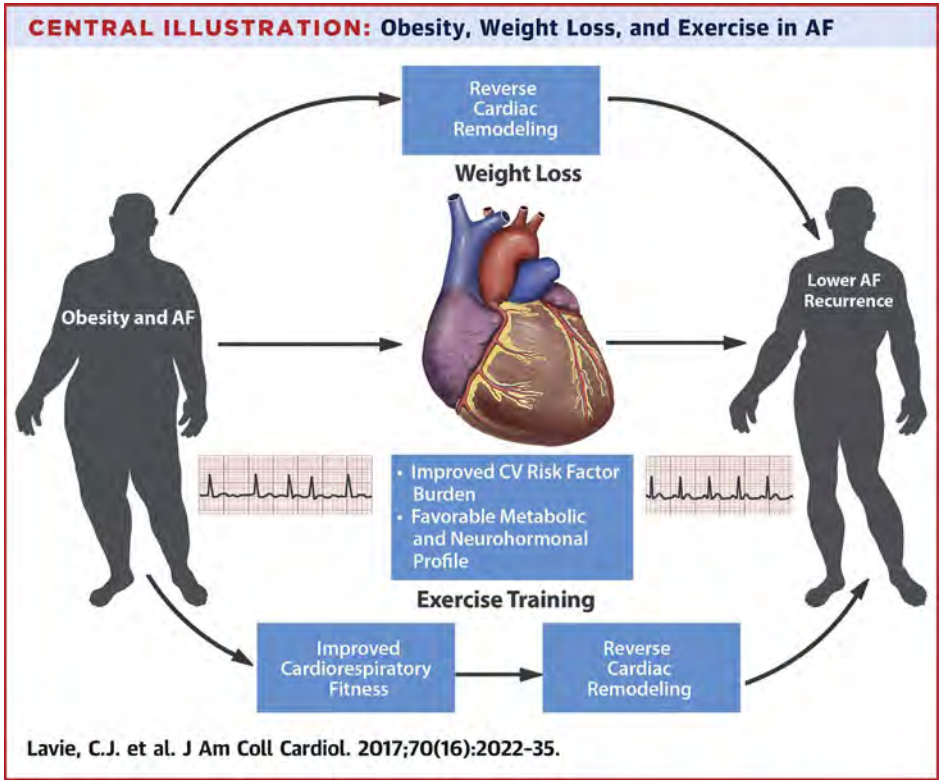
AF associations: obesity

- Obesity increases AF risk
  - Proinflammatory epicardial fat
  - Association with
    - HTN
    - OSA



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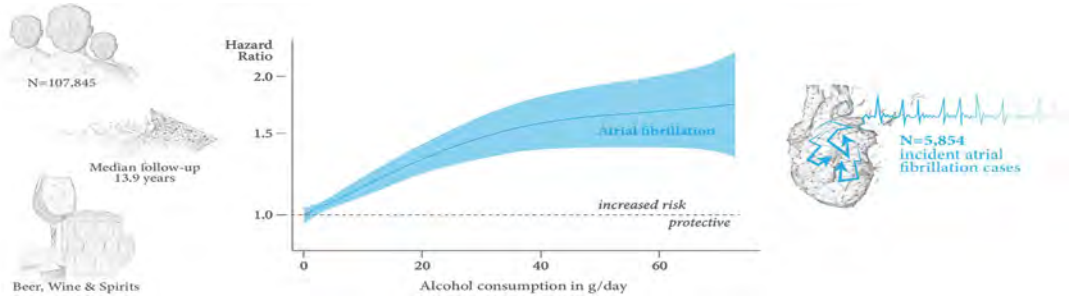
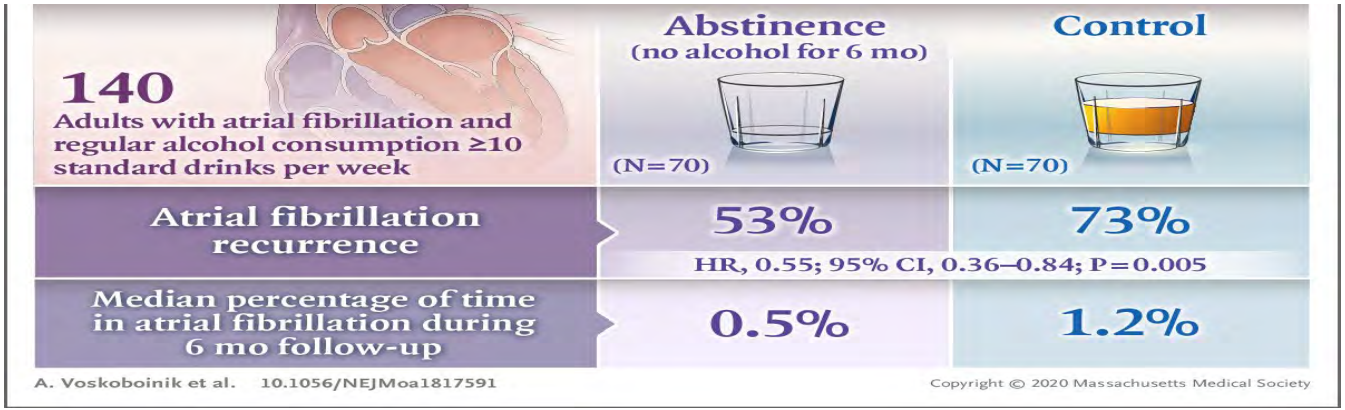
AF associations: alcohol



European Heart Journal, 2021, https://doi.org/10.1093/eurheartj/ehaa953



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Definitions

Paroxysmal AF

- AF that terminates spontaneously or with intervention within 7 d of onset. Episodes may recur with variable frequency.

Persistent AF

- Continuous AF that is sustained >7 d.

Long-standing persistent AF

- Continuous AF >12 mo in duration.

Permanent AF

- The patient and clinician make a joint decision to stop further attempts to restore and/or maintain sinus rhythm. Acceptance of AF represents a therapeutic attitude on the part of the patient and clinician rather than an inherent pathophysiological attribute of AF.
- Acceptance of AF may change as symptoms, efficacy of therapeutic interventions, and patient and clinician preferences evolve.

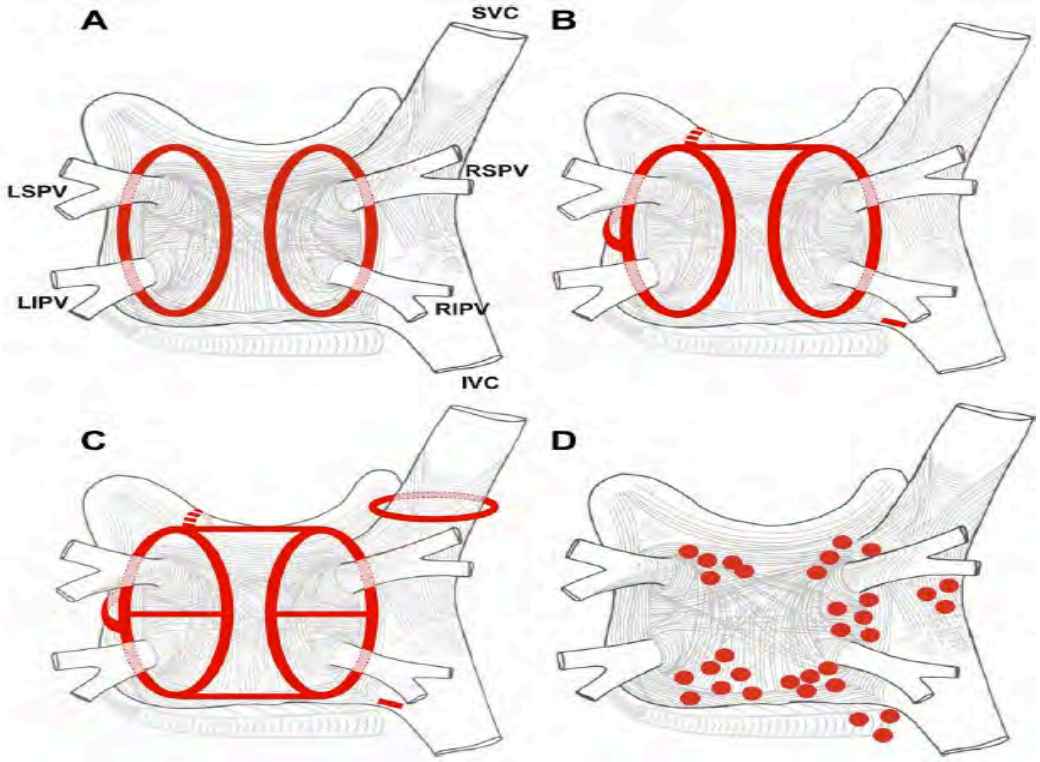
Nonvalvular AF

- AF in the absence of rheumatic mitral stenosis, a mechanical or bioprosthetic heart valve, or mitral valve repair.

Treatment Goals

- #1: Symptom suppression
- #2: Improve outcomes:
  - Prevent strokes
  - Prevent tachycardia-induced cardiomyopathy
  - Prevent dementia?
  - Reduce mortality?
- Approaches:
  - Rhythm control
  - Rate control/anticoagulation
- HOW?
  - Antiarrhythmic drugs
  - Anticoagulation
  - Ablation to restore normal rhythm

Atrial Fibrillation Ablation Strategies



Calkins et al *Heart Rhythm* 2012

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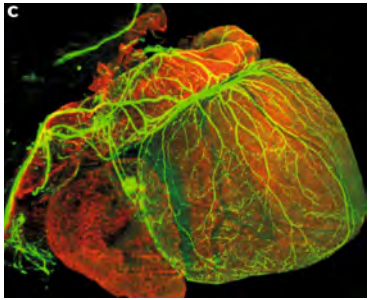
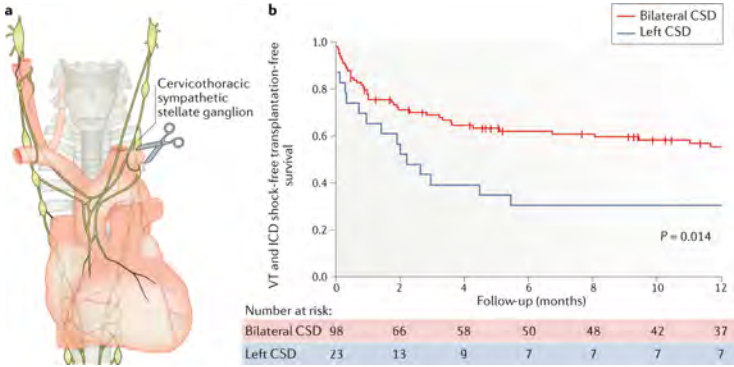
Nerves Modulate Cardiac Function

- All aspects of cardiac function are modulated by cardiac innervation
- Time scale:
  - Beat-by-beat
  - Circadian
  - Seasonal
- Innervation modulates “flight-or-fight” response
- Innervation triggers clinical events such as sudden cardiac death, atrial fibrillation, syncope due to conduction block and others
- Denervation can improve ventricular arrhythmias



Nature Reviews Cardiology volume 16, pages 707–726 (2019)



Vasegui et al, *J Am Coll Cardiol* 2017 Jun 27;69(25):3070-3080.

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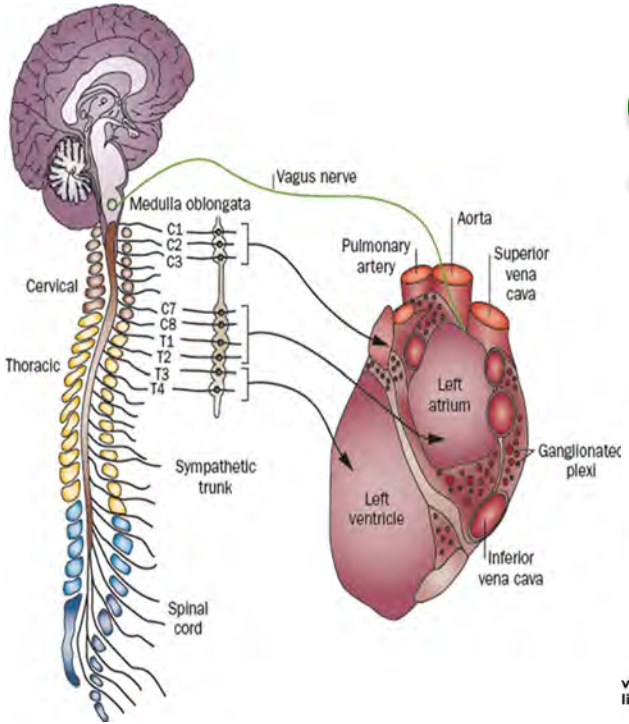
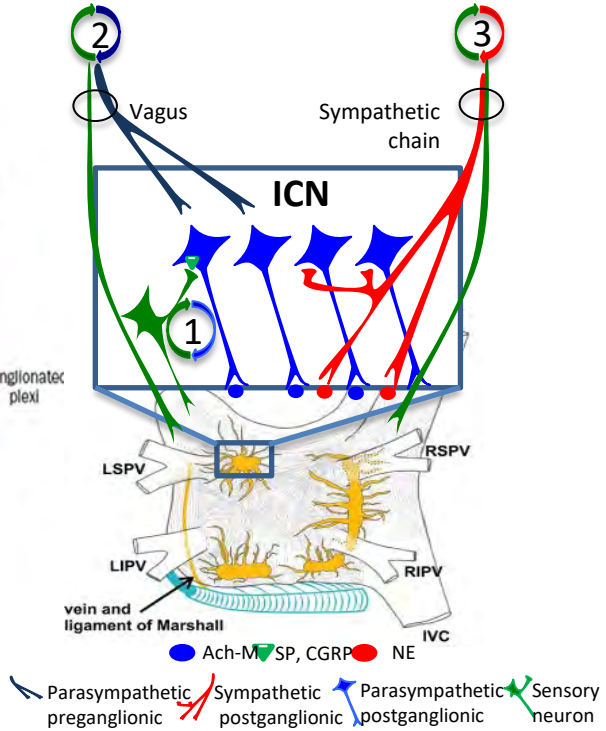
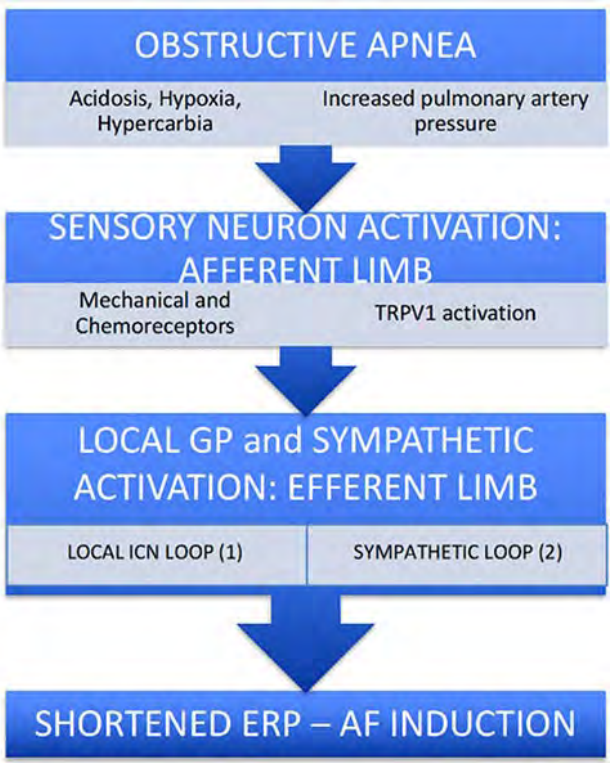
Role of cardiac intervention in sleep apnea and AF







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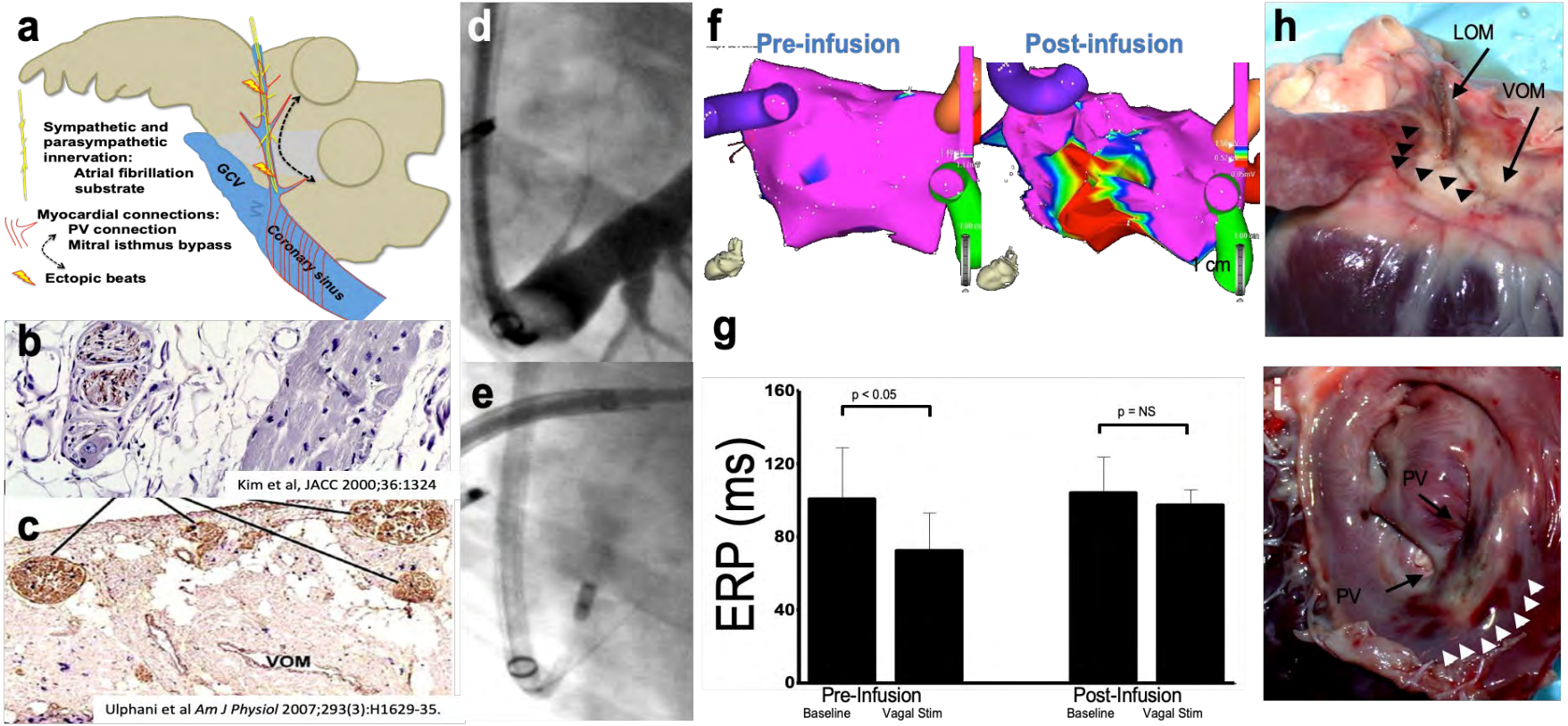
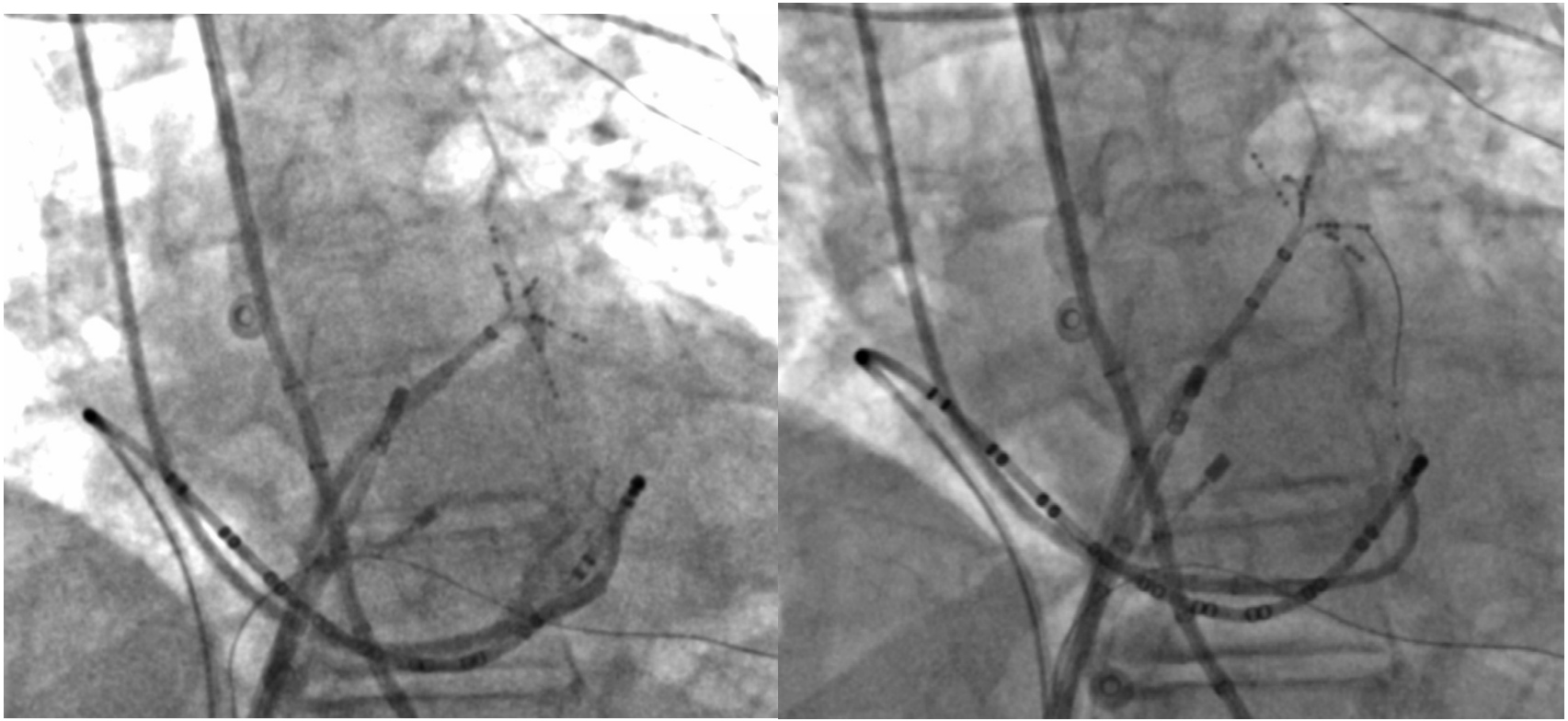
Tavares… Valderrabano et al *Circ Arrhythm Electrophysiol*. 2019;12:e006942.

Vein of Marshall and AF



Vein of Marshall ethanol



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JAMA | Original Investigation

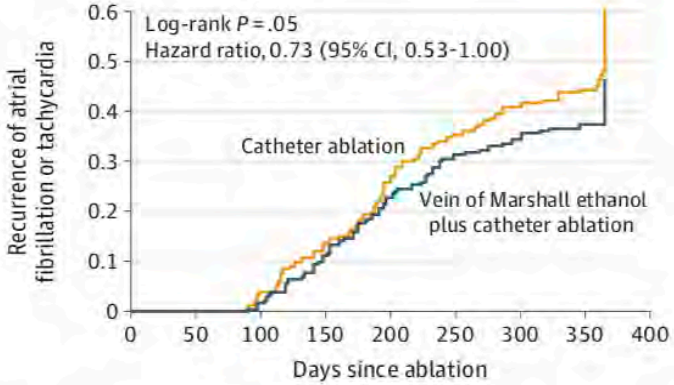
Effect of Catheter Ablation With Vein of Marshall Ethanol Infusion vs Catheter Ablation Alone on Persistent Atrial Fibrillation

The VENUS Randomized Clinical Trial

JAMA. 2020;324(16):1620-1628. doi:10.1001/jama.2020.16195

Miguel Valderrábano, MD; Leif E. Peterson, PhD; Vijay Swarup, MD; Paul A. Schurmann, MD; Akash Makkar, MD; Rahul N. Doshi, MD; David DeLurgio, MD; Charles A. Athill, MD; Kenneth A. Ellenbogen, MD; Andrea Natale, MD; Jayanthi Koneru, MD; Amish S. Dave, MD, PhD; Irakli Giorgberidze, MD; Hamid Afshar, MD; Michelle L. Guthrie, RN; Raquel Bunge, RN; Carlos A. Morillo, MD; Neal S. Kleiman, MD

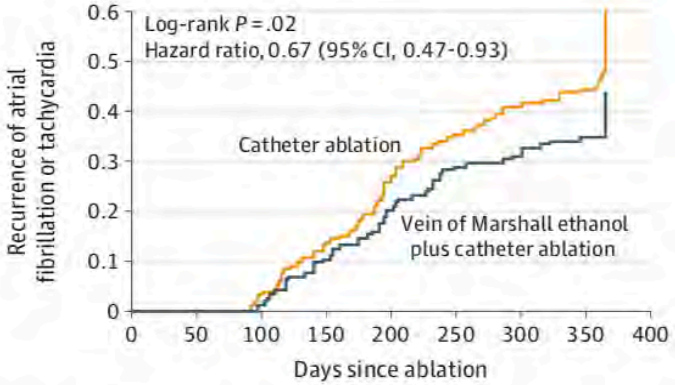
A Atrial fibrillation or tachycardia occurrence after single procedure in as-randomized analysis



No. at risk

Vein of Marshall ethanol plus catheter ablation	185	180	174	153	129	116	108	89	68
Catheter ablation	158	157	148	132	110	95	86	69	54

B Atrial fibrillation or tachycardia occurrence after single procedure in as-treated analysis



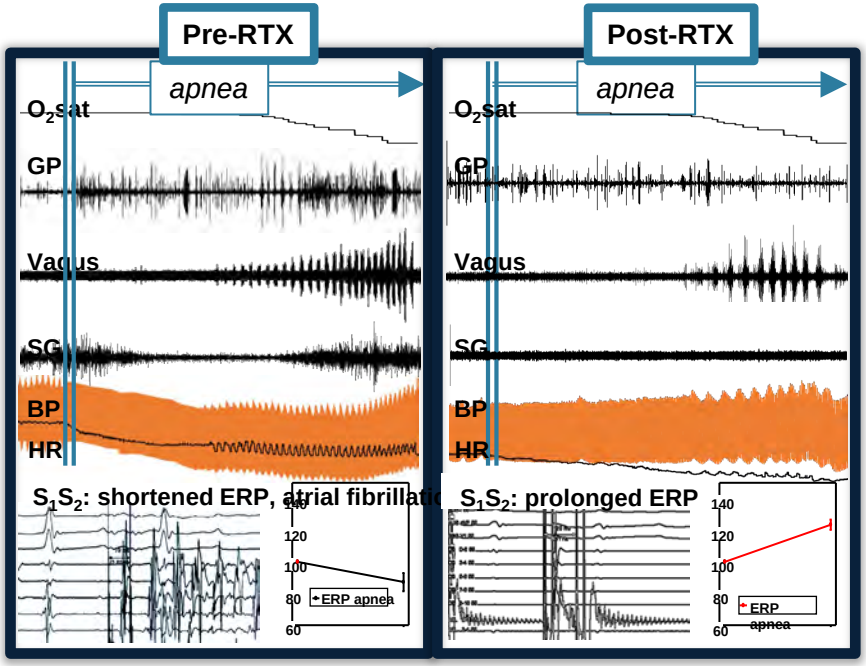
No. at risk

Vein of Marshall ethanol plus catheter ablation	155	151	145	129	111	100	95	77	58
Catheter ablation	158	157	148	132	110	95	86	69	54

Scoville Heat Scale:
Strength of TRPV1 activation

Abolishing apnea-induced AF

- Apnea in AF: nerve recordings in humans



ORIGINAL ARTICLE

Cardiac Afferent Denervation Abolishes Ganglionated Plexi and Sympathetic Responses to Apnea

Implications for Atrial Fibrillation

BACKGROUND: The autonomic nervous system response to apnea and its mechanistic connection to atrial fibrillation (AF) are unclear. We hypothesize that sensory neurons within the ganglionated plexi (GP) play a role. We aimed to delineate the autonomic response to apnea and to test the effects of ablation of cardiac sensory neurons with resiniferatoxin (RTX), a neurotoxic TRPV1 (transient receptor potential vanilloid 1) agonist.

METHODS: Sixteen dogs were anesthetized and ventilated. Apnea was induced by stopping ventilation until oxygen saturations decreased to 80%. Nerve recordings from bilateral vagal nerves, left stellate ganglion,

Liliana Tavares, MD
Moisés Rodríguez-Mañero, MD, PhD
Bahij Kreidieh, MD
Sergio H. Ibarra-Cortez, MD
Jiexiao Chen, BS
Sufen Wang, PhD
Judit Markovits, DVM, PhD
Roberto Barrios, MD
Miguel Valderrábano, MD

Funded by the Lois and Carl Davis Centennial Chair, DeBakey Funds, Charles Burnett III Endowment

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Tavares… Valderrabano et al *Circ Arrhythm Electrophysiol*. 2019;12:e006942.

Nerves-and-atrial fibrillation research

- Collaboratio
- Co-cultures
  interactions
- Nerve recor
- Planned NIH
  - On-going s

Department of Health and Human Services
National Institutes of Health
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

Notice of Award
FAIN# R01HL168277
Federal Award Date
03/17/2023

Recipient Information

1. Recipient Name
METHODIST HOSPITAL, THE
6670 BERTNER AVE

HOUSTON, TX 77030

2. Congressional District of Recipient
09

3. Payment System Identifier (I
1870721923A1

4. Employer Identificati
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5. Data Univers umbering S tem (DUNS)
185 052

6. R ient nique Entity Identifier
XJU YJW

ect Director or Principal Investigator
el Valderrabano, MD (Contact)

Federal Award In mati

11. Award N
1R01H 827

12. ique deral A ard Identification Number (FAIN)
R0 168

Authority
2 USC 241 42 CFR 52

14. Federal Award Project Title
Cardiac Autonomic Activation In Atrial Fibrillation Triggers And Substrate

15. Assistance Listing Number
93.837

16. Assistance Listing Program Title
Cardiovascular Diseases Research

17. Award Action Type
New Competing

18. Is the Award R&D?

NIH FUNDED!!

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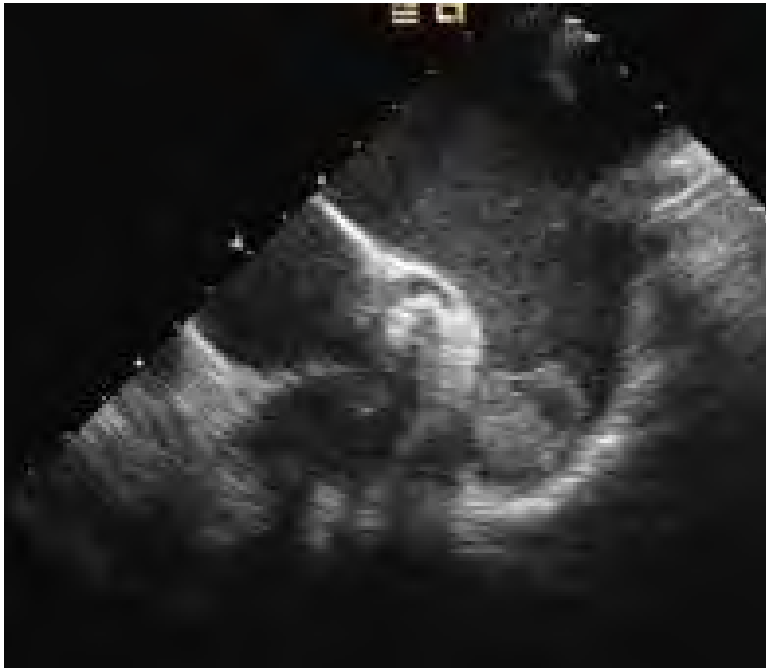
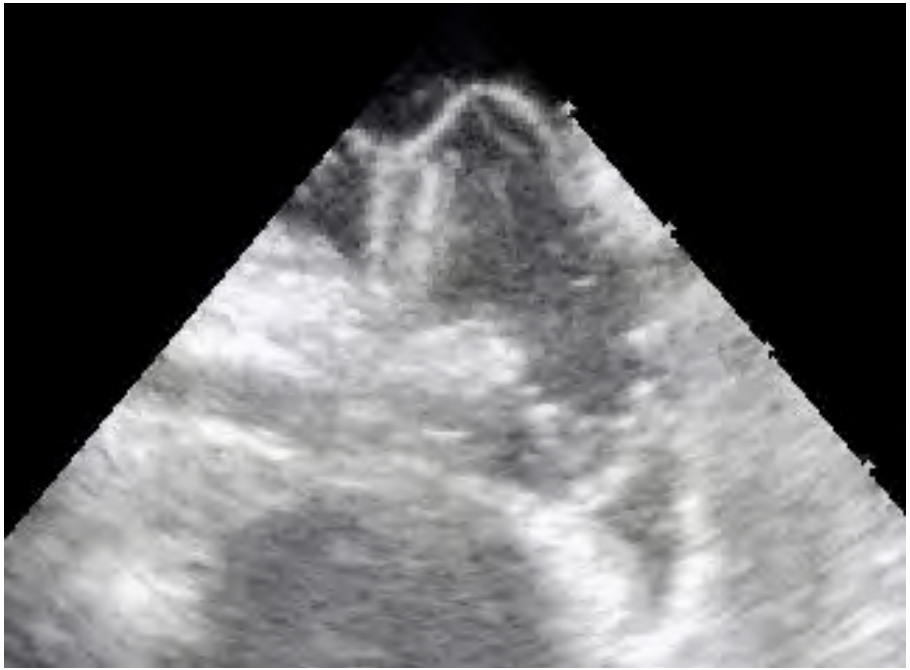
Stroke prevention strategies

- Systemic anticoagulation
  - Warfarin
  - NOACs
- LAA closure
  - Watchman and other devices
  - Lariat
  - Atri-clip
- Selecting the right strategy requires individualization of risks/benefits!

Left Atrial Appendage
Occlusion via intracardiac echo guidance





Hemam et al *Heart Rhythm*. 2019 Mar;16(3):334-342.

HOUSTON Methodist LEADING MEDICINE

Houston Methodist Update

Marc L. Boom

September 28, 2023

HOUSTON Methodist LEADING MEDICINE

When you focus on the fundamentals...

the awards will follow.

HOUSTON Methodist LEADING MEDICINE

Vizient Q&A Ranking Trend by Hospital

	2016	2017	2018	2019	2020	2021	2022	2023
HMH	9 / 102 ★★★★★	15 / 107	8 / 99 ★★★★★	11 / 93 ★★★★★	6 / 100 ★★★★★	6 / 101 ★★★★★	6 / 107 ★★★★★	12 / 116 ★★★★★
HMSL	25 / 124	59 / 161	11 / 100	2 / 79 ★★★★★	2 / 97 ★★★★★	4 / 117 ★★★★★	2 / 124 ★★★★★	3 / 181 ★★★★★
HMB	80 / 124	104/161	28 / 100	34 / 82	17 / 100	8 / 121 ★★★★★	2 / 145 ★★★★★	2 / 181 ★★★★★
HMW	12 / 124 ★★★★★	20 / 161	5 / 100 ★★★★★	10 / 82	7 / 100 ★★★★★	4 /121 ★★★★★	3 / 145 ★★★★★	4 / 181 ★★★★★
HMWB	38/124	63 / 161	16 / 100	5 / 82 ★★★★★	8 / 100 ★★★★★	9 / 121 ★★★★★	6 / 145 ★★★★★	5 / 181 ★★★★★
HMTW	–	–	–	3 / 82 ★★★★★	5 / 100 ★★★★★	1 / 121 ★★★★★	1 / 145 ★★★★★	1 / 181 ★★★★★
HMCL	30 / 124	27 / 161	50 / 93	52 / 95	53 / 135	22 / 226	34 / 267	13 / 333 ★★★★★

HOUSTON Methodist LEADING MEDICINE

Awards and Accolades

- Houston Methodist Hospital
- Houston Methodist Baytown
- Houston Methodist Clear Lake
- Houston Methodist The Woodlands
- Houston Methodist West
- Houston Methodist Willowbrook

HOUSTON Methodist LEADING MEDICINE

Awards and Accolades

Houston Methodist ranked #24 on Forbes' list of "America's Best Employers for Women"

HOUSTON Methodist LEADING MEDICINE

Awards and Accolades

Centennial Tower: The Big Pour!

HOUSTON Methodist LEADING MEDICINE

Media Updates

HOUSTON Methodist LEADING MEDICINE

C M Y K Nxxx,2023-08-28,A,001,Bs-4C,E1

"All the News That's Fit to Print"

The New York Times

LATE EDITION
Today partly sunny, dry, high 76. Tonight, mostly cloudy, rain, thunderstorm, low 66. Tomorrow, mostly cloudy, rain, thunderstorms, high 76. Weather map appears on Page D8.

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Wagner Future Is As Shadowy As Its Business

Group With Tentacles Beyond Its Fighters

By PAUL SONNE and VALERIE HOPKINS

Its leader is officially dead, as is its founding commander. President Vladimir V. Putin of Russia is claiming it doesn't exist.

Wagner, the once-powerful Russian private military company that fell out of favor with the Kremlin after an aborted mutiny in June, has been cast into even greater uncertainty since Wednesday, when its leader, Yevgeny V. Prigozhin, died in a plane crash.

The Russian authorities said Sunday that DNA tests, conducted on bodies recovered from the site in the Tver region, confirmed that Mr. Prigozhin and nine other people listed on the plane's manifest had died in the suspicious crash.

Now attention is shifting to whether Wagner, which Mr. Prigozhin built over nearly a decade into a global empire that benefited Moscow as well as his own wallet, ultimately will die, too.

U.S. and Western officials say that the Kremlin is considering ways to bring Wagner under more direct control of the Russian state but hasn't made any final decisions on what to do with the group.

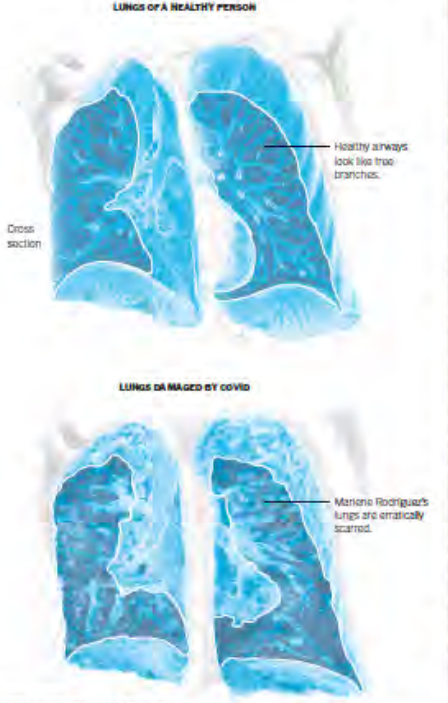
It is unlikely that Russia wants to squander the trained fighters, geopolitical inroads and business interests that Mr. Prigozhin cultivated since Wagner's founding in 2014. His outfit has operated in at least 10 countries.

But finding a way to neutralize an armed organization that posed one of the biggest threats to Mr. Putin's tenure in 24 years, while also retaining its fighting power and global links, is a difficult task, particularly given the longstanding enmity between fighters with the private military company and

Continued on Page A 8

A View of Covid's Damage, From Inside

Lung scans of real patients, rendered in 3-D, offer a rare look at the shrunken airways, scarred tissue, and other injuries to those who contracted severe Covid-19 early in the pandemic and still struggle with its lasting effects. Pages A12-14.



Sources: Houston Methodist Outpatient Center; U.C.L.A. Medical Center
Note: The healthy lung scan shows the lungs of a 54-year-old Midwestern man.

Georgia Defendants Spar Over Trial Dates and Sites

Lawyers for Trump and Others Tangle Case — Some Seek Move to Federal Court

By RICHARD FAUSSET and DANNY HAKIM

ATLANTA — Even as former President Donald J. Trump and his 18 co-defendants in the Georgia election interference case turned themselves in one by one at an Atlanta jail last week, their lawyers began working to change how the case would play out.

They are already at odds over when they will have their day in court, but also, crucially, where. Should enough of them succeed, the case could split into several smaller cases, perhaps overseen by different judges in different courtrooms, running on different timelines.

Five defendants have already sought to move the state case in federal court, citing their ties to the federal government. The first one to file — Mark Meadows, Mr. Trump's chief of staff during the 2020 election — will make the arguments for removal on Monday, in a hearing before a federal judge in Atlanta.

Federal officials charged with state crimes can move their cases to federal court if they can convince a judge that they are being charged for actions connected to their official duties, among other things.

In the Georgia case, the question of whether to change the venue — a legal maneuver known as removal — matters because it would affect the composition of a jury. If the case stays in Fulton County, Ga., the jury will come from a bastion of Democratic politics where Mr. Trump was trounced in 2020. If the case is removed to federal court, the jury will be drawn from a 10-county region of Georgia that is more suburban and rural — and somewhat more Trump-friendly. Because it takes only one not-guilty vote to hang a jury, this modest advantage could prove to be a very big deal.

The coming fights over the proper venue for the case are only one strand of a complicated tangle of efforts being launched by a gaggle of defense lawyers now representing Mr. Trump and the 18 others named in the 98-page racketeering indictment. Last week, the lawyers clogged both state and federal court dockets with motions that will also determine when the case begins.

Already, one defendant's case is splitting off as a result. Kenneth Chesebro, a lawyer who advised Mr. Trump after the 2020 election, has asked for a speedy trial, and the presiding state judge has agreed to it. His trial is now set to begin on Oct. 23. Another defendant, Sidney Powell, filed a similar motion on Friday, and a third, John Eastman, also plans to invoke his right to an early trial, ac-

Continued on Page A15

HEARINGS Judges may begin to address some of the many cases' many complexities. PAGE A15

Realtors Chief Facing Claims Of Misconduct

By DEBRA KAMIN

Media Updates

SIGHT FOR SORE EYES

Professor's vision restored after battling a tumor near his optic nerve and a near-fatal embolism

By Lindsay Peyton
CORRESPONDENT

At first, Al Danto, 62, chalked his blurry vision up to eye strain from grading papers.

Hundreds of students enroll each semester in his new enterprise and enterprise acquisition courses in Rice University's MBA program. When essays are due, Danto can find himself reading for hours on end.

"I just thought my eyes were getting worse over time," the West University Place resident said. "Everything was fuzzy."

When he scheduled an appointment at Texas Eye Center, his optometrist discovered a cataract and then scheduled surgery. After the procedure, however, Danto's vision did not improve.

His optometrist then ordered an MRI. Images revealed a large tumor pressing on his optic nerve.

"It was a complete shock," Danto said. "My first thought was that it was malignant. I was scared to death."

His next thought was to find the most accomplished neurosurgeon around. "I wanted to get in the best hands possible," he said.

Danto called his friend Dr. Joseph Galati, medical director for the Center for Liver Disease and Transplantation at Houston Methodist Hospital and founder of Liver Specialists of Texas.

"I've been close friends with Al for 30 years," Galati said. "He and his wife, Donna, were the first people that we met when we moved here. He was my neighbor."

Danto and Galati had sons about the same age, coached Little League together and went to each other's backyard barbecues.

Over the years, Galati would ask Danto for business advice, and Danto would lean on Galati for medical guidance.

When Danto sent a copy of his MRI report, Galati replied, "The only person I would see would be Dr. Baskin."

Without delay, Galati called Dr. David Baskin, neurosurgery and brain tumor expert at Houston Methodist Hospital.

"There's this friend of mine. Can you see him sooner than later?" Galati asked.

Just the beginning

Baskin determined that the growth was benign and, despite its size, would not impact Danto cognitively.

"He presented with an absolutely gigantic tumor, pressing on both frontal lobes," Baskin said. "But the brain has incredible adaptive capabilities, if you can carefully dissect the tumor away from the brain using microsurgical technique."

Baskin explained that, while any brain surgery of this magnitude is high risk, his team at Methodist is prepared for the most severe cases. "It's what we do," he said.

Danto was expecting an eight-hour operation, then two or three days of recovery in the hospital. "I'll be in and out," he said.

Nothing could have been further from the truth.

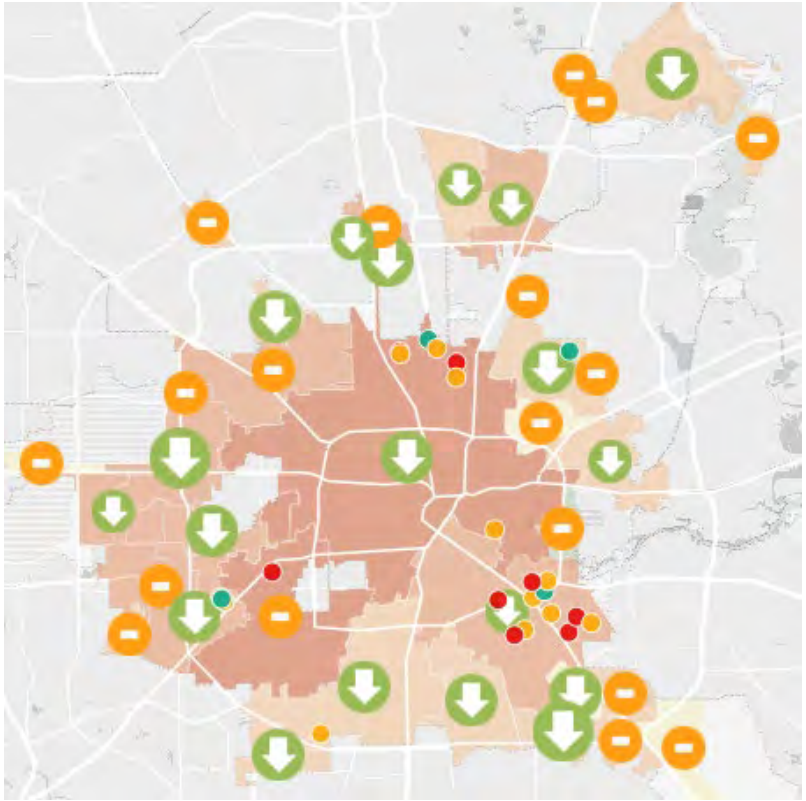
The operation began at 7:30 a.m. on May 25, 2021. Part of the surgery involved using an ultrasound device to shatter the tumor. Then, Baskin went to work removing each section. "We dissected quite a bit," Baskin said.

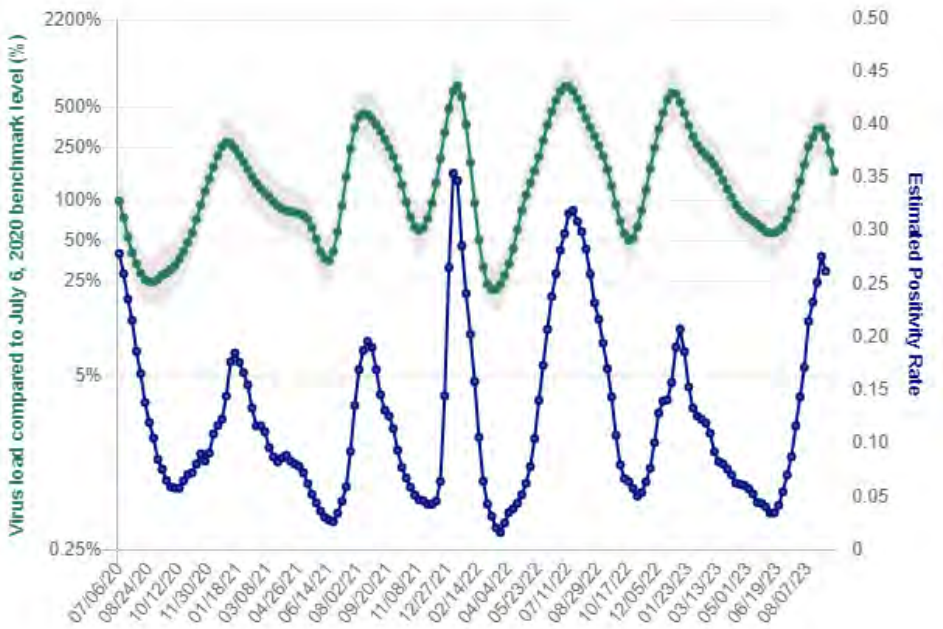
By 5:30 p.m., however, the neurosur-

Vision continues on A12

HOUSTON Methodist LEADING MEDICINE

City Of Houston COVID-19 Wastewater Monitoring





Viral Load

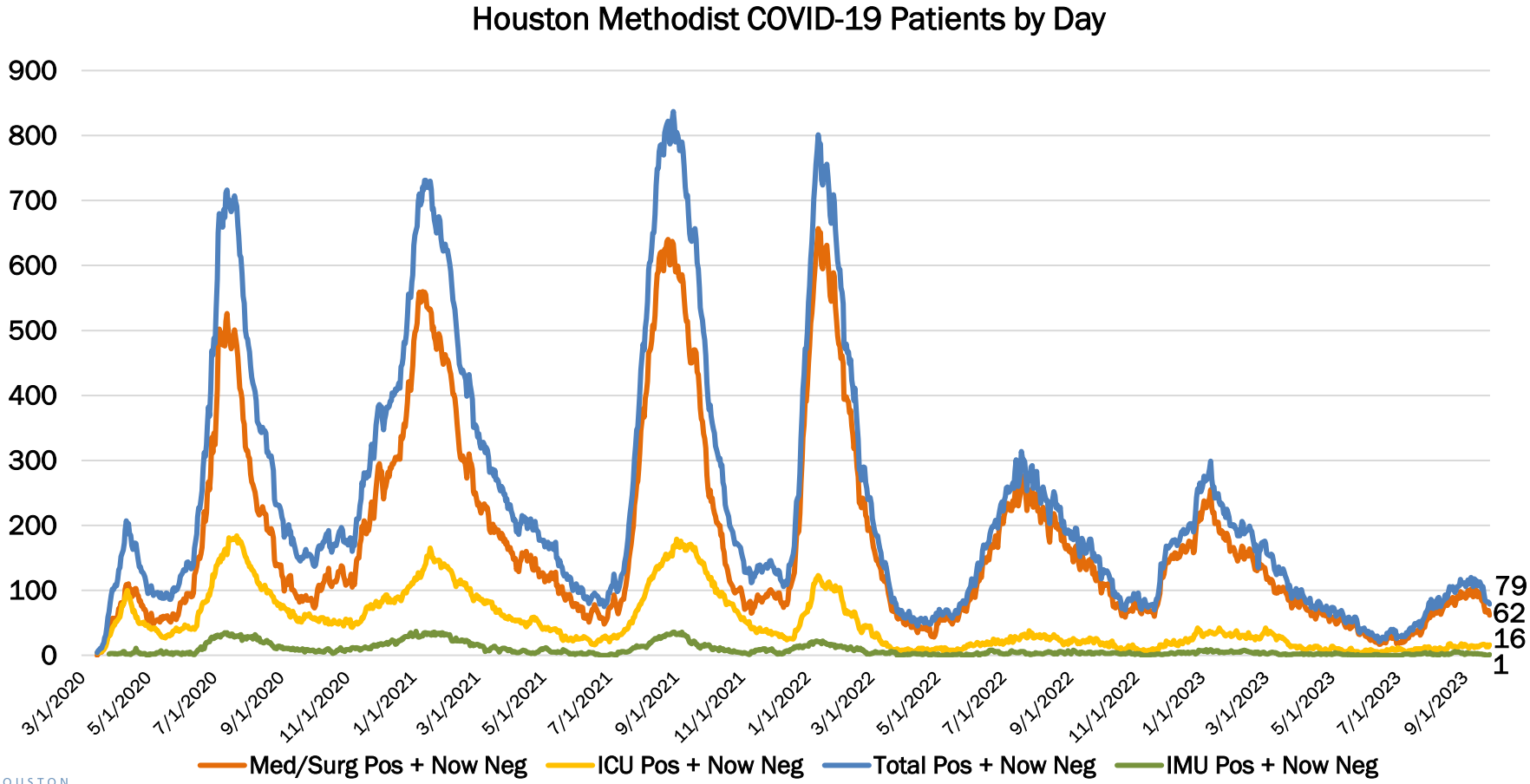
166%

In comparison to July 6, 2020

Positivity Rate

26.2%

HOUSTON Methodist LEADING MEDICINE



HOUSTON Methodist LEADING MEDICINE

FALL 2023 VACCINES

Version: Sept 2023

	What are the options?	Who is eligible?	How well do they work?	When should I get it?
INFLUENZA 	A shot that targets 4 strains of seasonal flu	6 months and older	Reduces the risk of going to the doctor by 53%	October is ideal, as vaccine protection wanes over a season
COVID-19 	Updated vaccine formula targeting XBB - an Omicron subvariant Options: Moderna and Pfizer (mRNA). Novavax (protein) avaliable soon	6 months and older	Last year, the fall COVID-19 vaccine provided 40-60% additional effectiveness against severe disease	Protection against **severe disease**: Get now Protection against **infection**: Best to get it right before a wave, which can be challenging to time **Recently infected?** Wait at least 3-4 months
RSV (OLDER ADULTS) 	2 options: GSK and Pfizer. They are slightly different in design, but only at a microscopic level	60 years and older	82-86% efficacy against severe disease	Now; no need to juggle timing as protection is durable
RSV (PREGNANCY) 	Pfizer is actively seeking approval	Pregnant people (then protection will pass to baby for protection in first 6 months of life)	82% efficacy in preventing hospitalization in first 3 months of life. 69% efficacy after 6 months	It's not available yet but once approved, get at 24 to 36 weeks of pregnancy
RSV MONOCLONAL ANTIBODY 	This is not a vaccine (doesn't teach the body to make antibodies) but rather a proactive medication (provides antibodies)	**All** infants <8 months. High-risk infants 8-19 months	Reduces risk of hospitalization and healthcare visits by ~80%	Will be available soon. Protection lasts 4-6 months

By: Katelyn Jetelina, MPH PHD and Caitlin Rivers, MPH PHD. For more information go to Your Local Epidemiologist

HOUSTON Methodist LEADING MEDICINE

THANK YOU FOR ATTENDING OUR **TOWN HALL CONVERSATION**

For more information about AFib and heart failure, please contact Emily Schott at **ekschott@houstonmethodist.org**.

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