

Multidisciplinary Management of NAFLD: The UPMC FLOW Clinic

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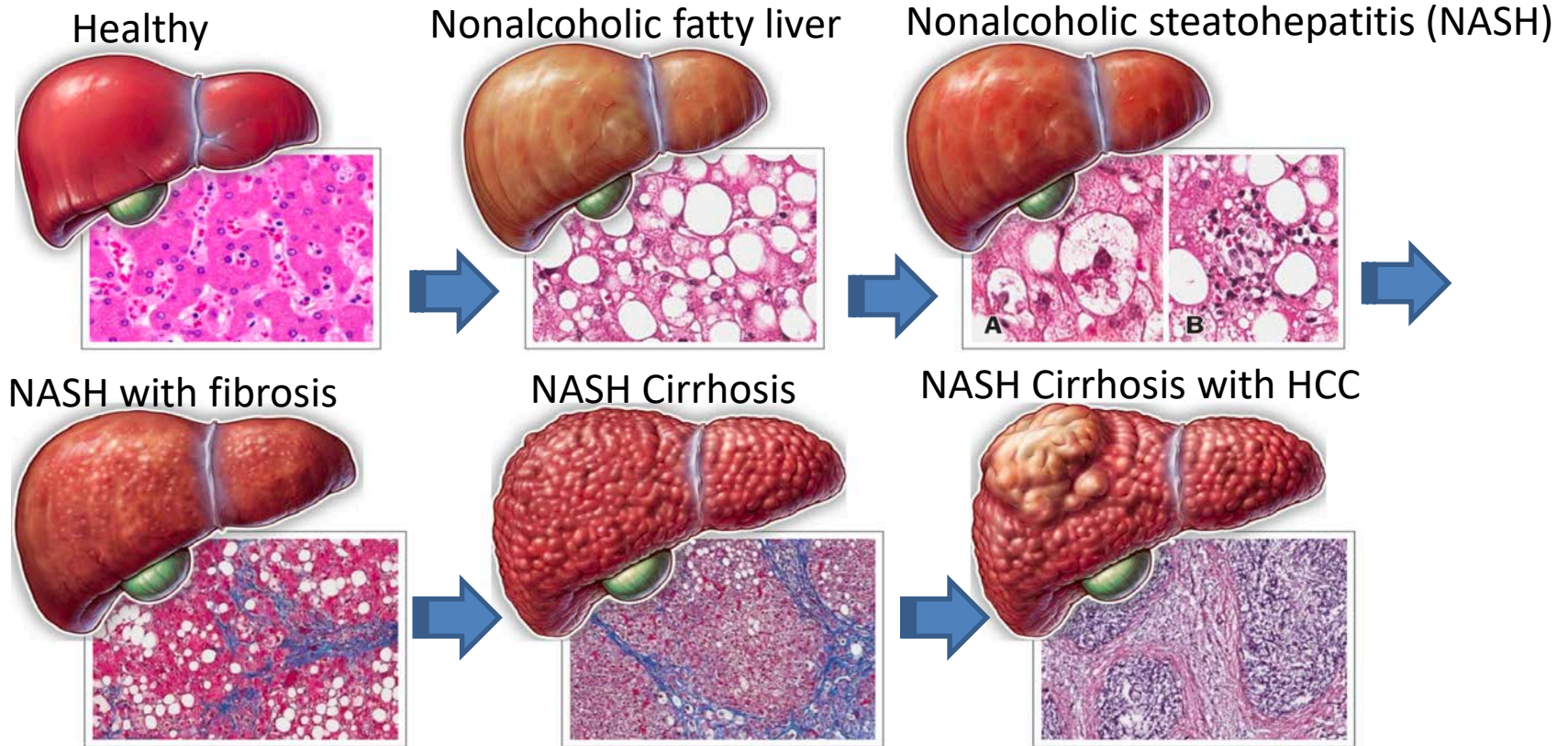
Overview of the presentation

Part 1: What's new for NAFLD in 2020?

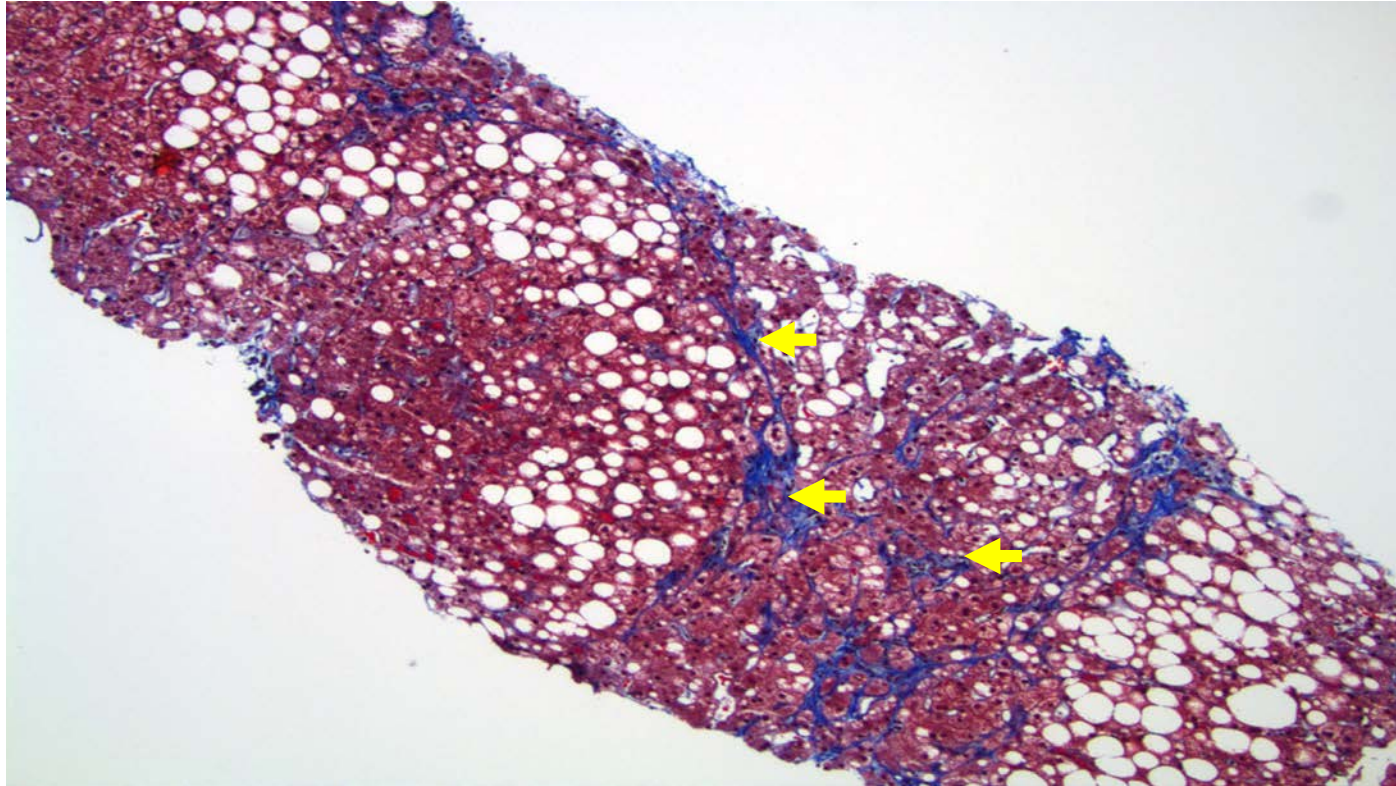
Part 2: Why is multidisciplinary care needed for NAFLD?

Part 3: The UPMC FLOW clinic approach

Natural history of NASH



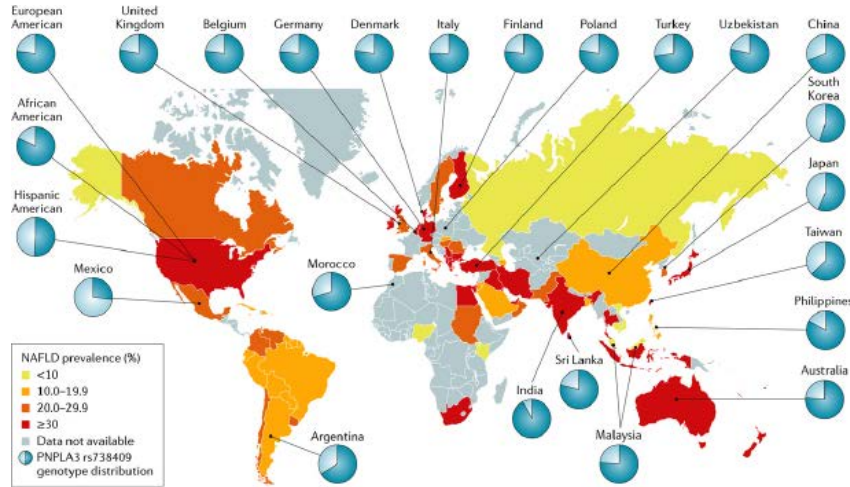
NASH is characterized by chicken-wire pattern of liver fibrosis



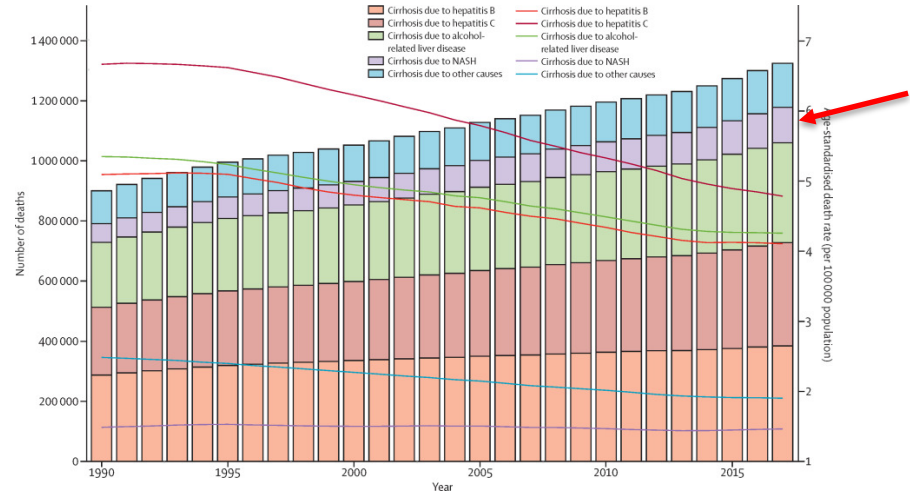
Part 1

What new for NAFLD in 2020?

Prevalence of NAFLD/MAFLD is increasing worldwide

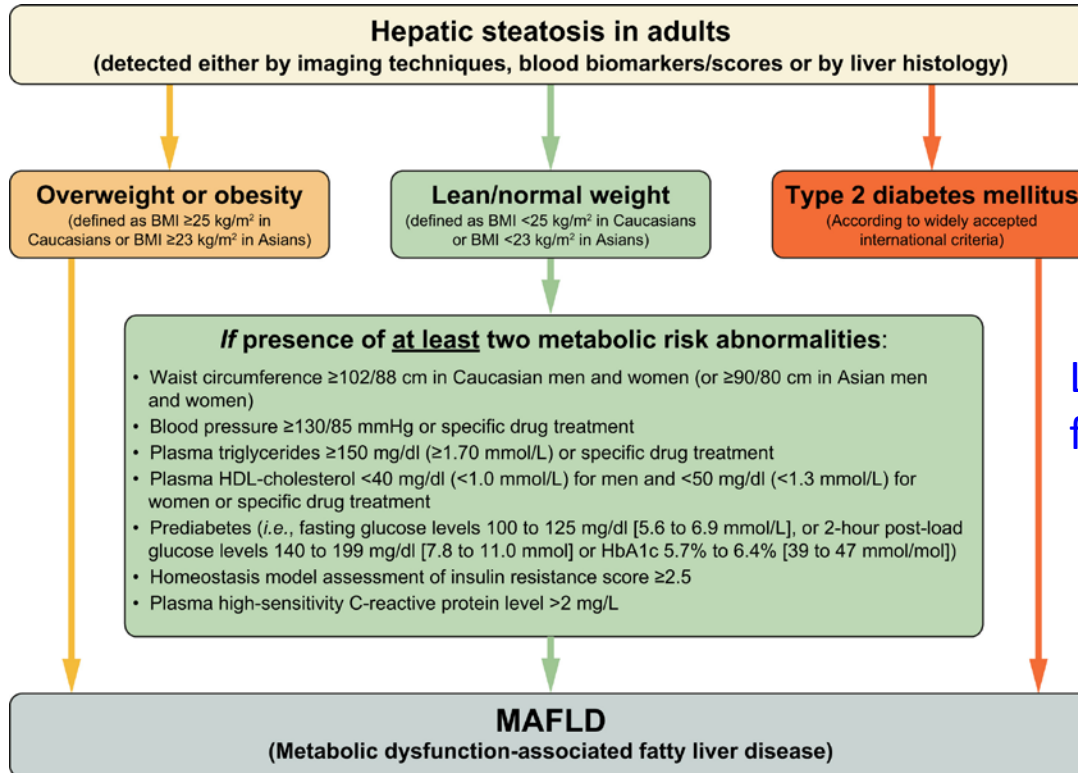


NAFLD prevalence (%)



Global deaths by cause of cirrhosis

New terminology for 2020 : “Positive” diagnostic criteria for MAFLD



Liver biopsy not required
for diagnosis of “NASH”

MAFLD-associated cirrhosis

Patient with **cirrhosis** in the absence of typical histology who meet at least one of the following criteria:

Past or present evidence of **metabolic risk factors** that meet the criteria to diagnose MAFLD

With at **least one** of the following:

- Documentation of MAFLD on a previous **liver biopsy**
- Historical documentation of steatosis by **hepatic imaging**

Development of noninvasive tests (NIT) for NAFLD

FIB-4
NFS
BARD

Fibrosure
ELF
Pro-C3

VCTE/CAP
US-SWE
MRE/PDFF
Multiscan

FAST
(Fibroscan + AST)

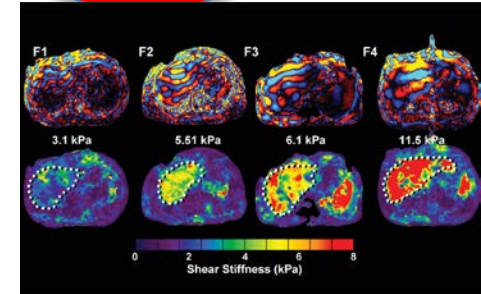
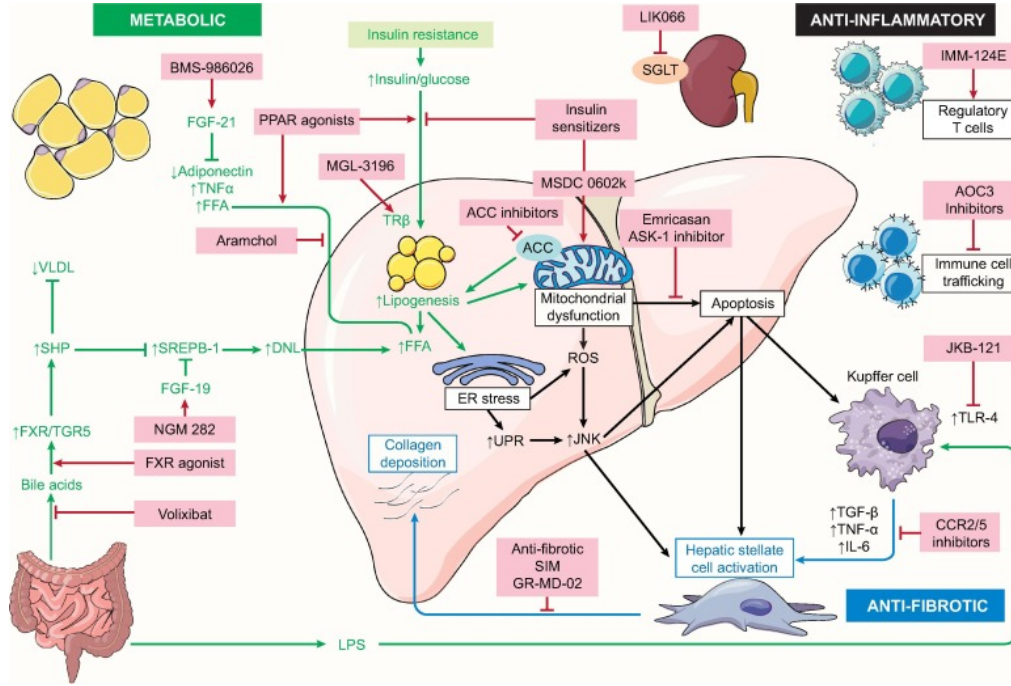


Image source: Echosens; GE Healthcare; Venkatesh et al 2013 J Magn Reson Imaging

Robust drug development pipeline for NASH



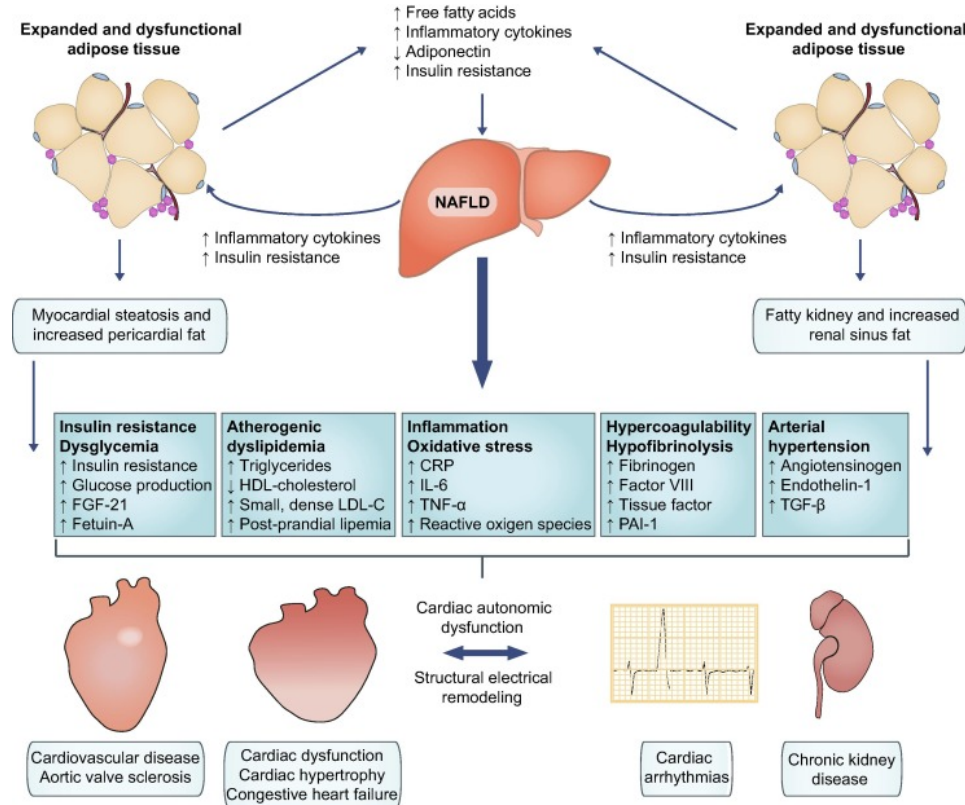
Phase 3 studies:

- Obeticholic acid (FXR agonist)
- Elafibrinor (PPAR α/δ agonist)
- Cenicriviroc (CCR2/5 chemokine antagonist)
- Resmetirom (Thyroid hormone receptor β agonist)
- Aramchol (Liver targeted SCD1 modulator)
- Belapectin (Galectin-3 inhibitor)

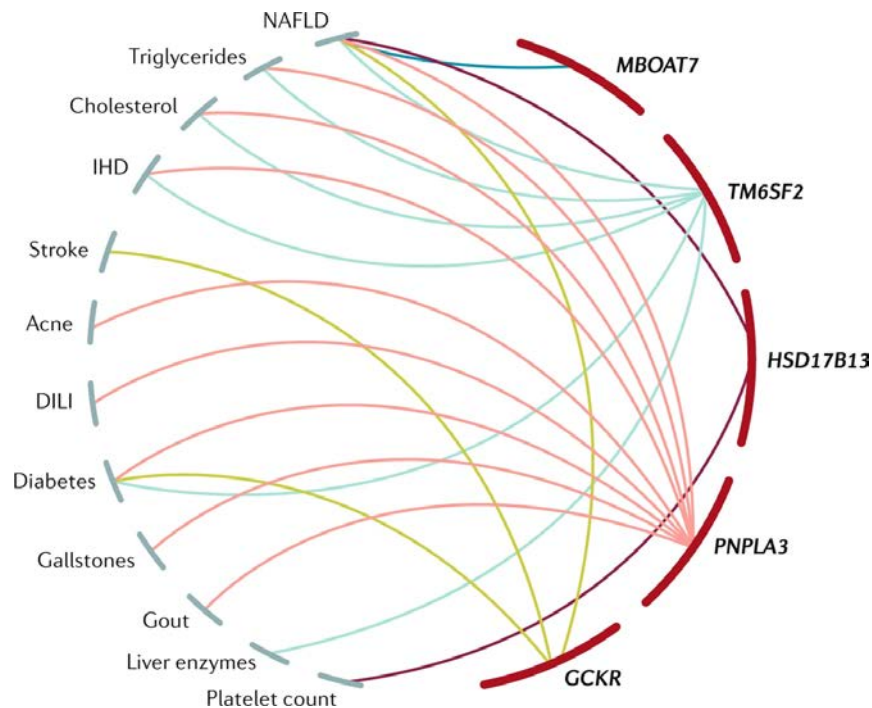
Part 2

Why is multidisciplinary care needed for NAFLD (MAFLD)?

NAFLD is a multisystemic disorder with shared pathophysiology with DM, CVD, CKD

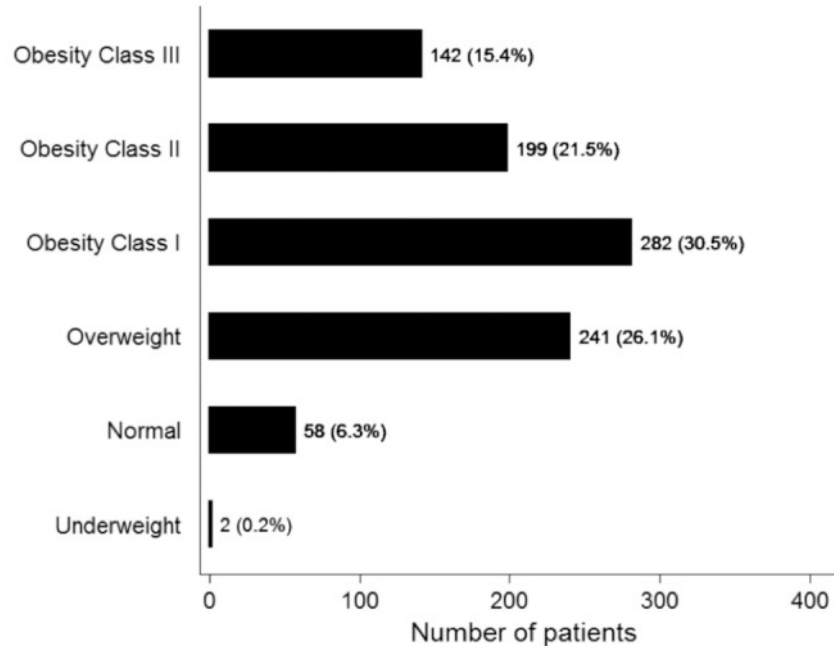


Genes associated with NAFLD have pleiotropic effects on other traits

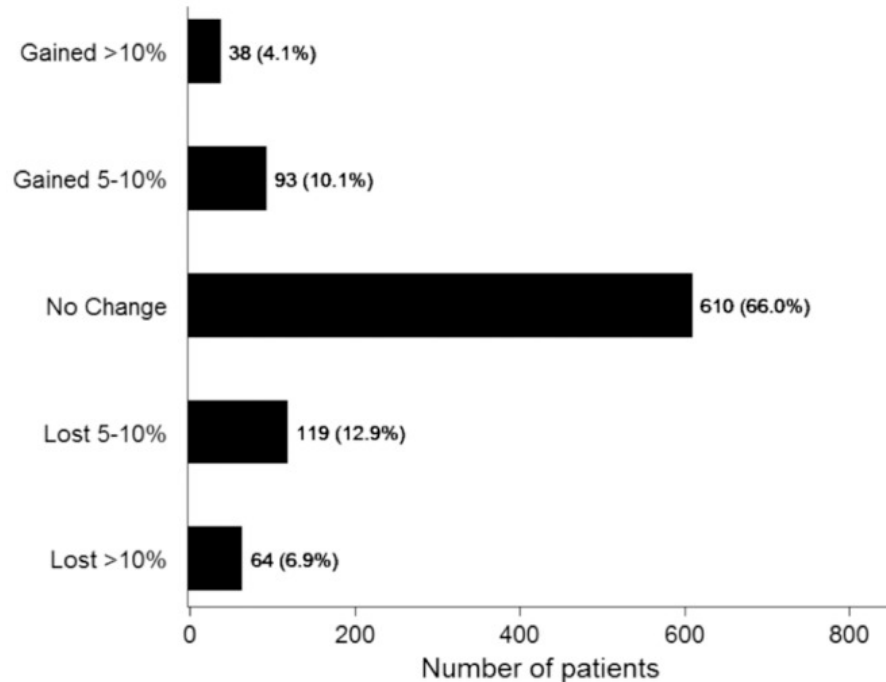


Most patients in our population have BMI > 25 kg/m²

924 non-cirrhotic NAFLD patients in CLD



Few patients achieve weigh loss with usual care in the liver clinic



Part 3

The UPMC FLOW Clinic Approach

Chronic care management model improves care

Delivery system redesign

Team-based program, goal-oriented,
shared decision making

Clinical information systems

EMR-based patient tracking,
bidirectional communication

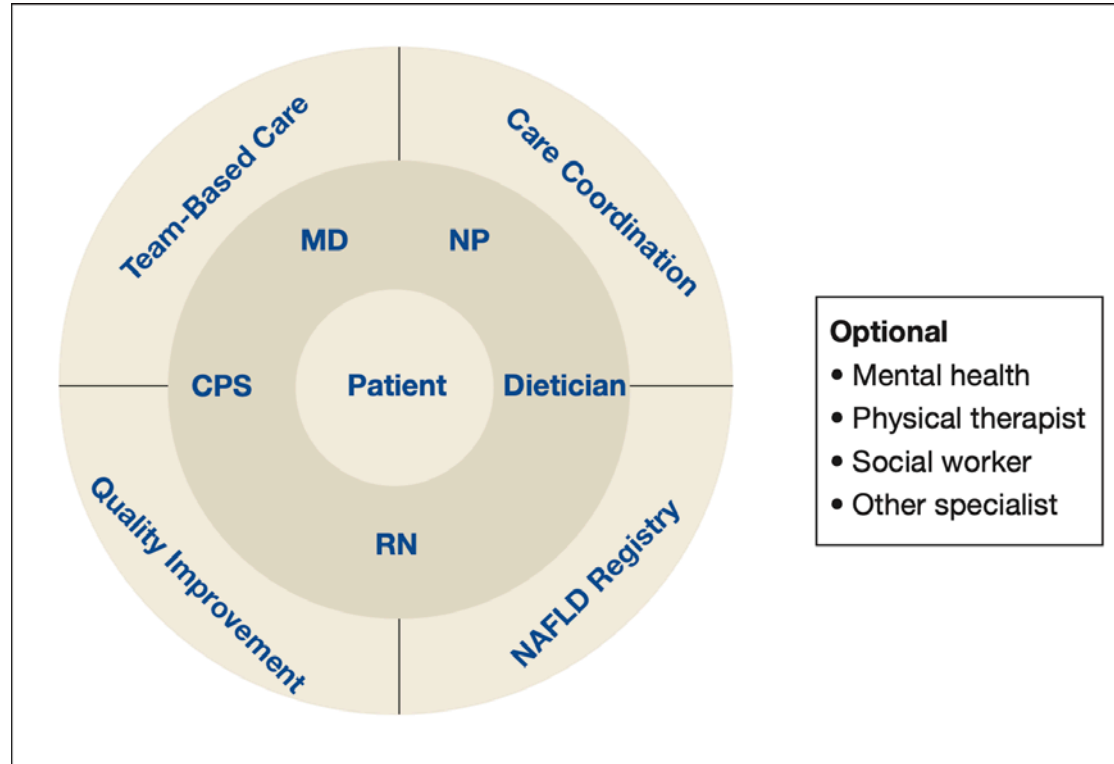
Decision support

Evidence-based treatment algorithms,
frequent team-based feedback

Self management support
and community resources

Patient self-management program,
community resources

A proposed model of NAFLD clinic

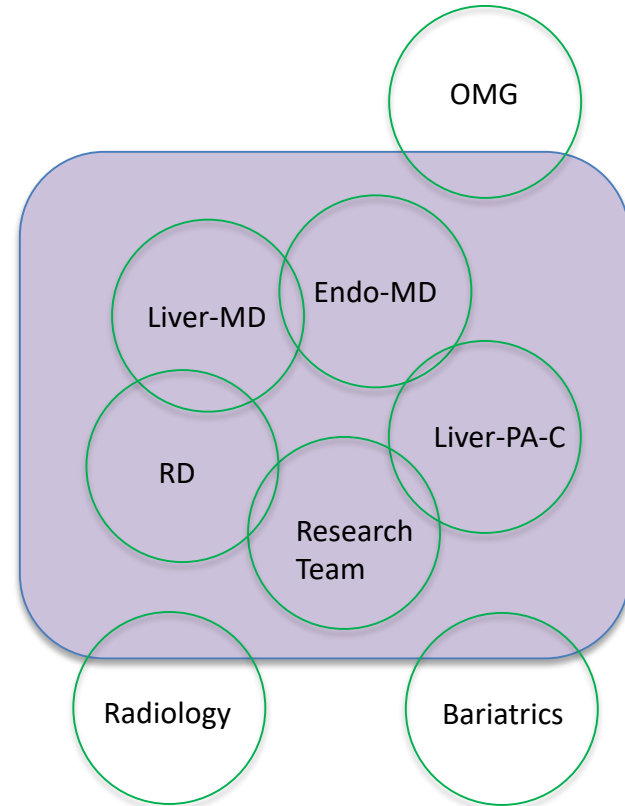
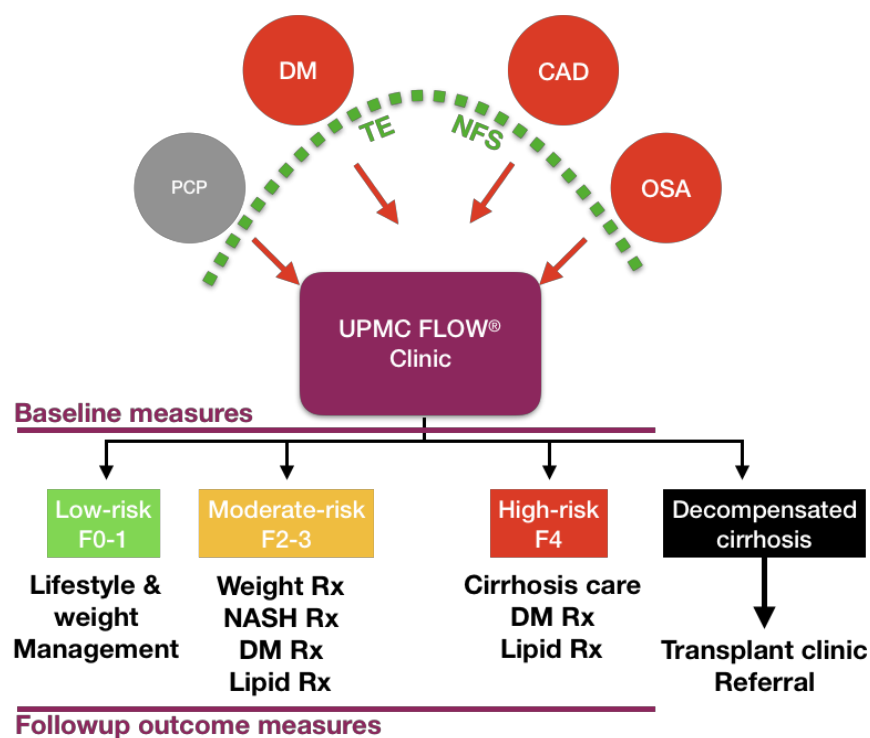


Is NASH underdiagnosed in our community?

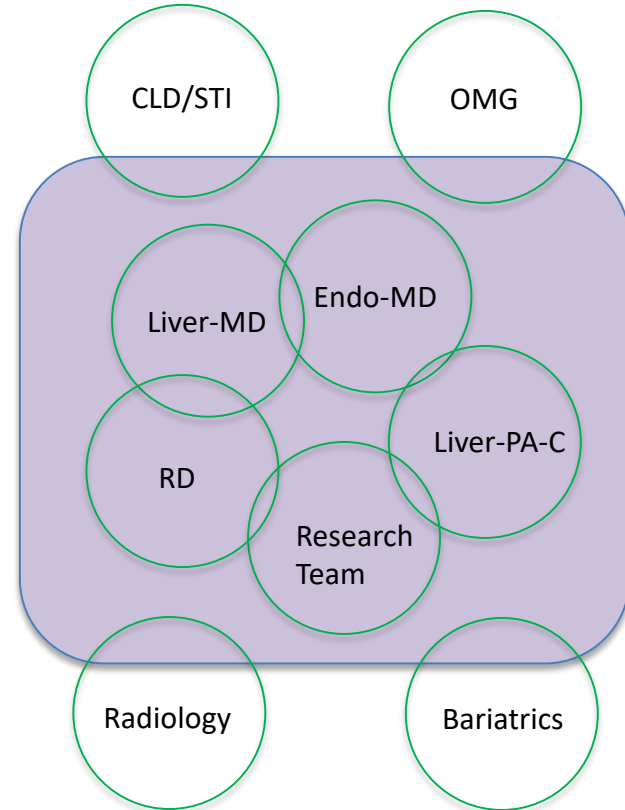
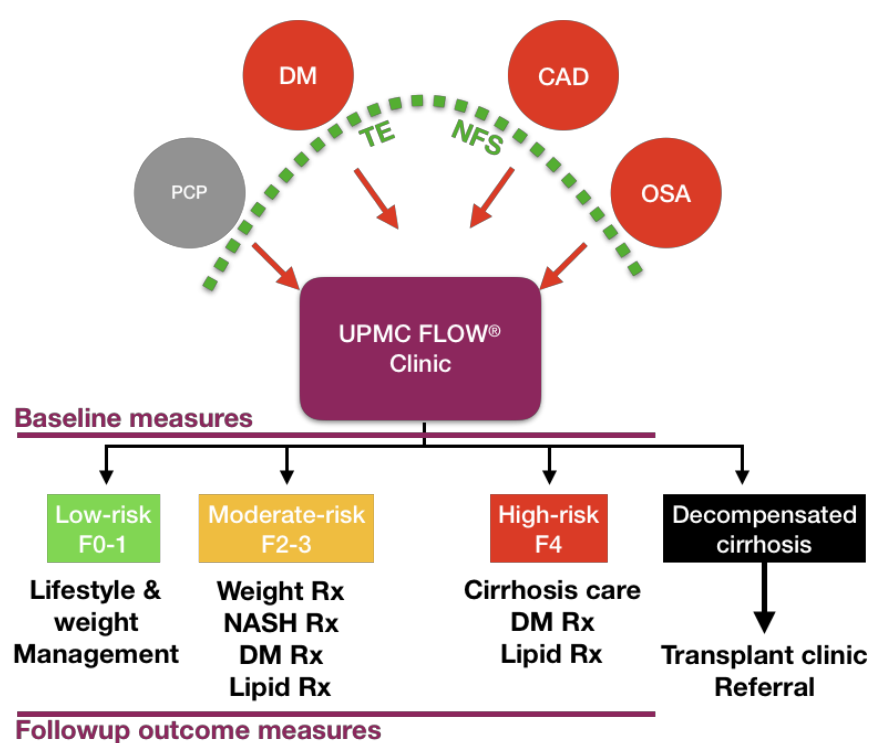
11 million patients across 7 sites in the Northeast and Midwest US

	NASH	NASH + Fibrosis	NASH + Cirrhosis	Total NASH	No NASH
N	3,820	233	3,139	7,192	11,072,655
FIB-4 category					
Low (%)	54.4	53.8	9.7	32.9	63.3
Intermediate (%)	34.4	36.2	22.8	28.9	28.8
High (%)	11.2	10.0	67.5	38.2	7.9

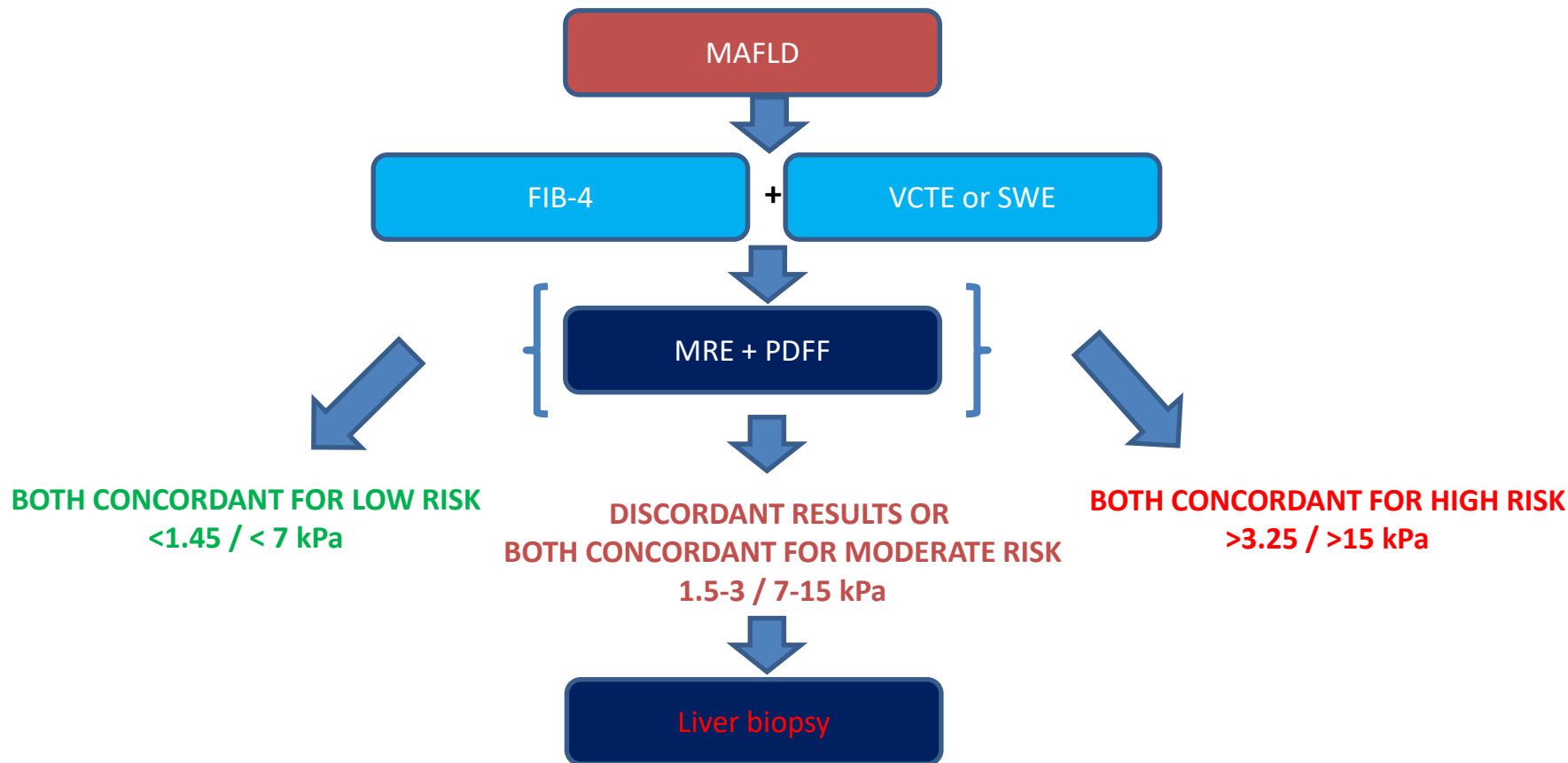
The UPMC FLOW clinic model



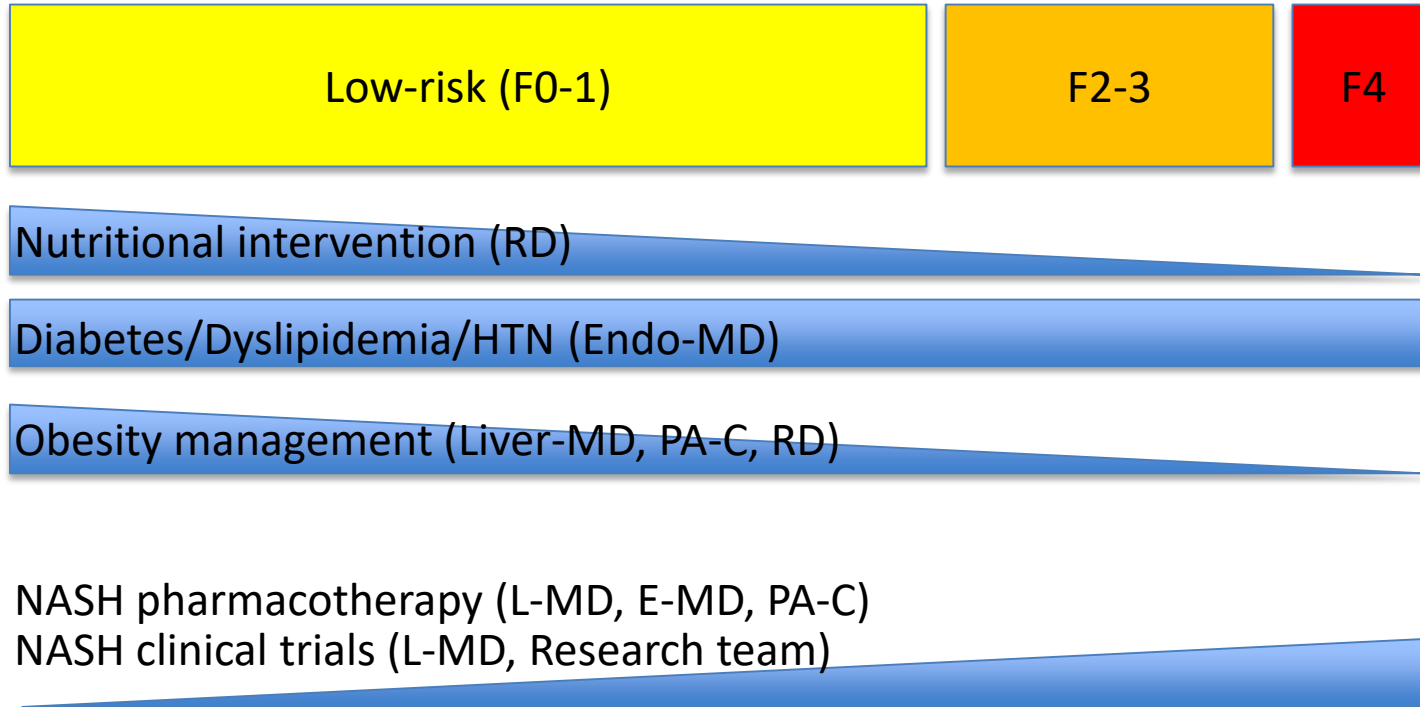
The UPMC FLOW clinic model



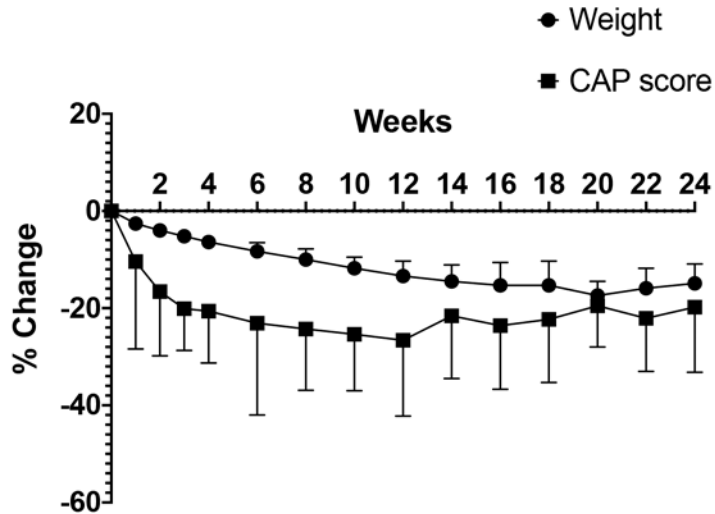
UPMC FLOW clinic simplified algorithm for risk stratification in MAFLD



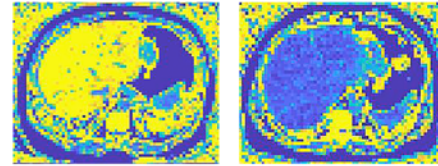
Management based on disease stage and comorbid conditions



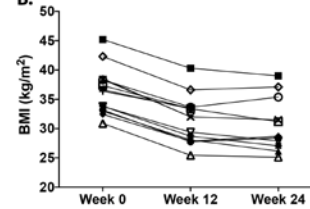
Diet-induced weight loss can achieve rapid and complete steatosis resolution



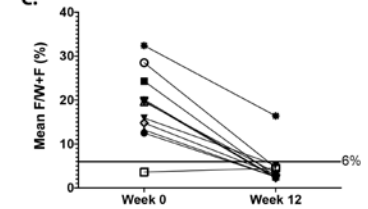
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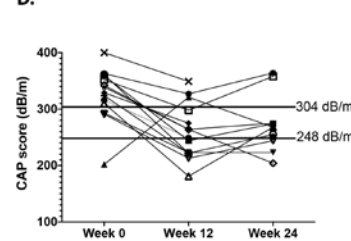
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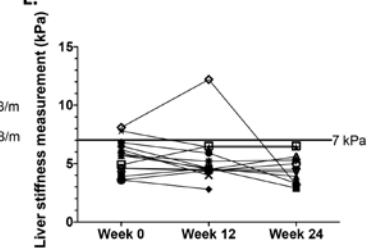
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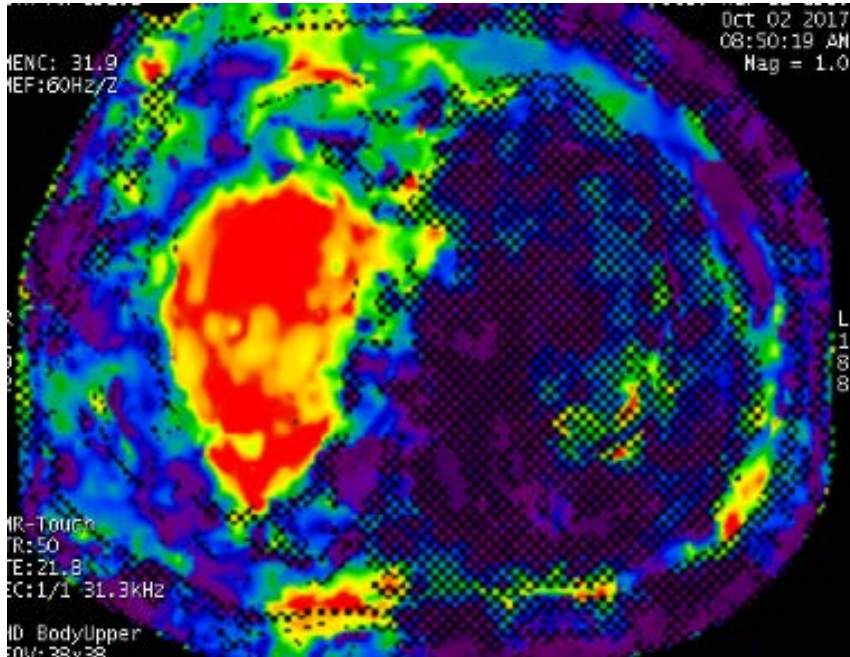


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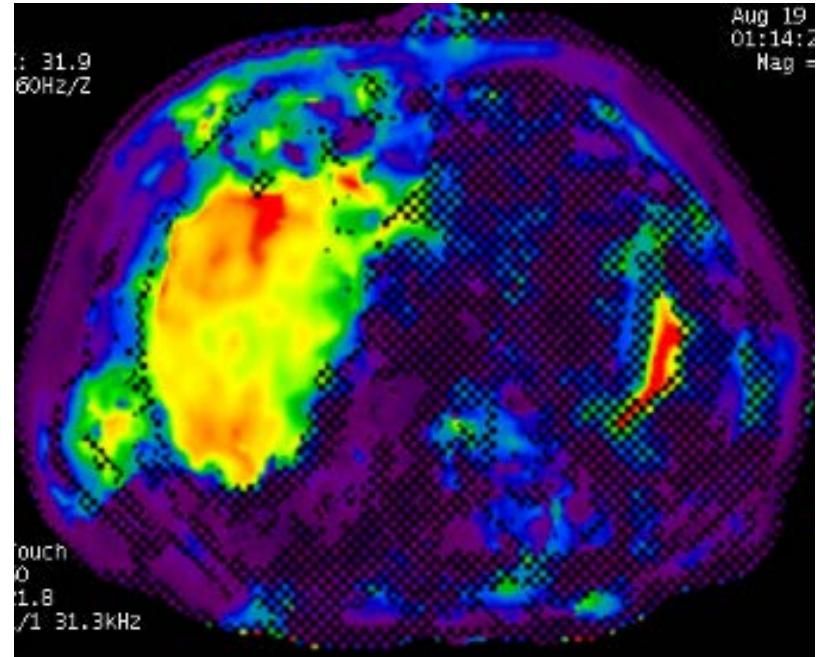


Multidisciplinary management of NASH- An example from the FLOW clinic

58 year old male with NASH, DM, hypogonadism



10/2017



8/2019

Key takeaways

What's new for NAFLD in 2020?

- New Definition of MAFLD
- Focus on NITs
- Exciting drug development pipeline

Why is multidisciplinary care needed for NAFLD?

- NAFLD is a multisystem disorder
- Shared pathophysiology
- Chronic care disease management model improves care

The UPMC FLOW clinic approach

- Integrating multidisciplinary care with clinical research
- Focus on lifestyle and weight management
- Outreach to other specialties and primary care practices

Acknowledgements

FLOW CLINIC Team

Maja Stefanovic-Racic, MD

Hannah Muehl, PA-C

Sabrina Palmieri, RD

Amy Schmotzer, RN, BSN

Bailey Sanden

Maris Leonard

Radiology

Alessandro Furlan, MD

Mitch Tublin, MD

Amir Borhani, MD

Bariatric surgery

Bestoun Ahmed, MD

Endocrinology

Esra French

David Rometo

Funding sources

NIA-NCATS/NIAAA

Gilead Sciences

Endra Life Sciences

Pittsburgh Liver Research Center

Pfizer