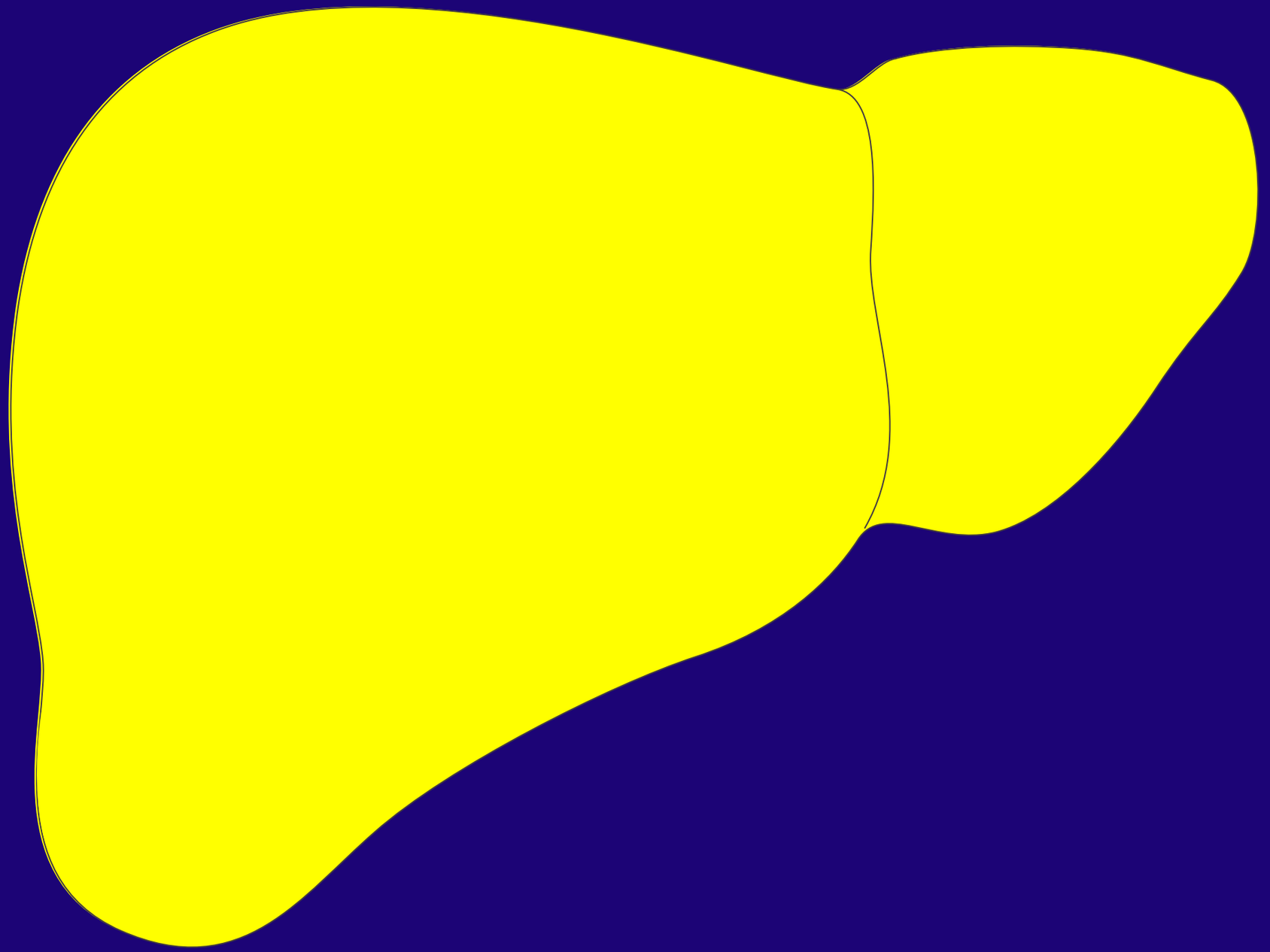
Bolivia Junio 9, 2021

Canal YouTube "William Otero Gastroenterólogo"

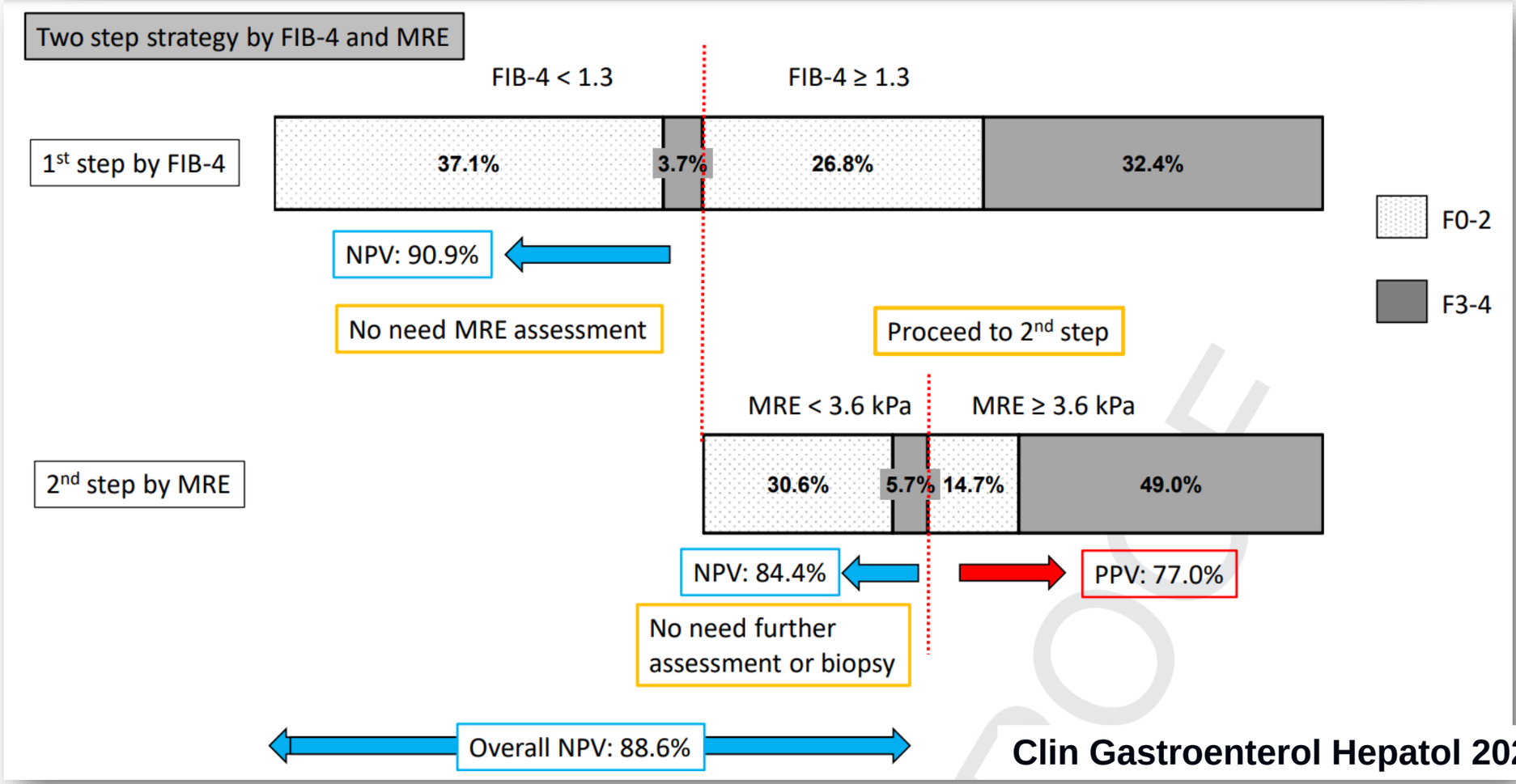
Esteatosis hepática de etiología no Alcohólica: diagnóstico, tratamiento Y pronóstico en COVID-19

William Otero R, MD, FAGA, FACP
Profesor Titular de Medicina
Universidad Nacional de Colombia
Hospital Universitario Nacional

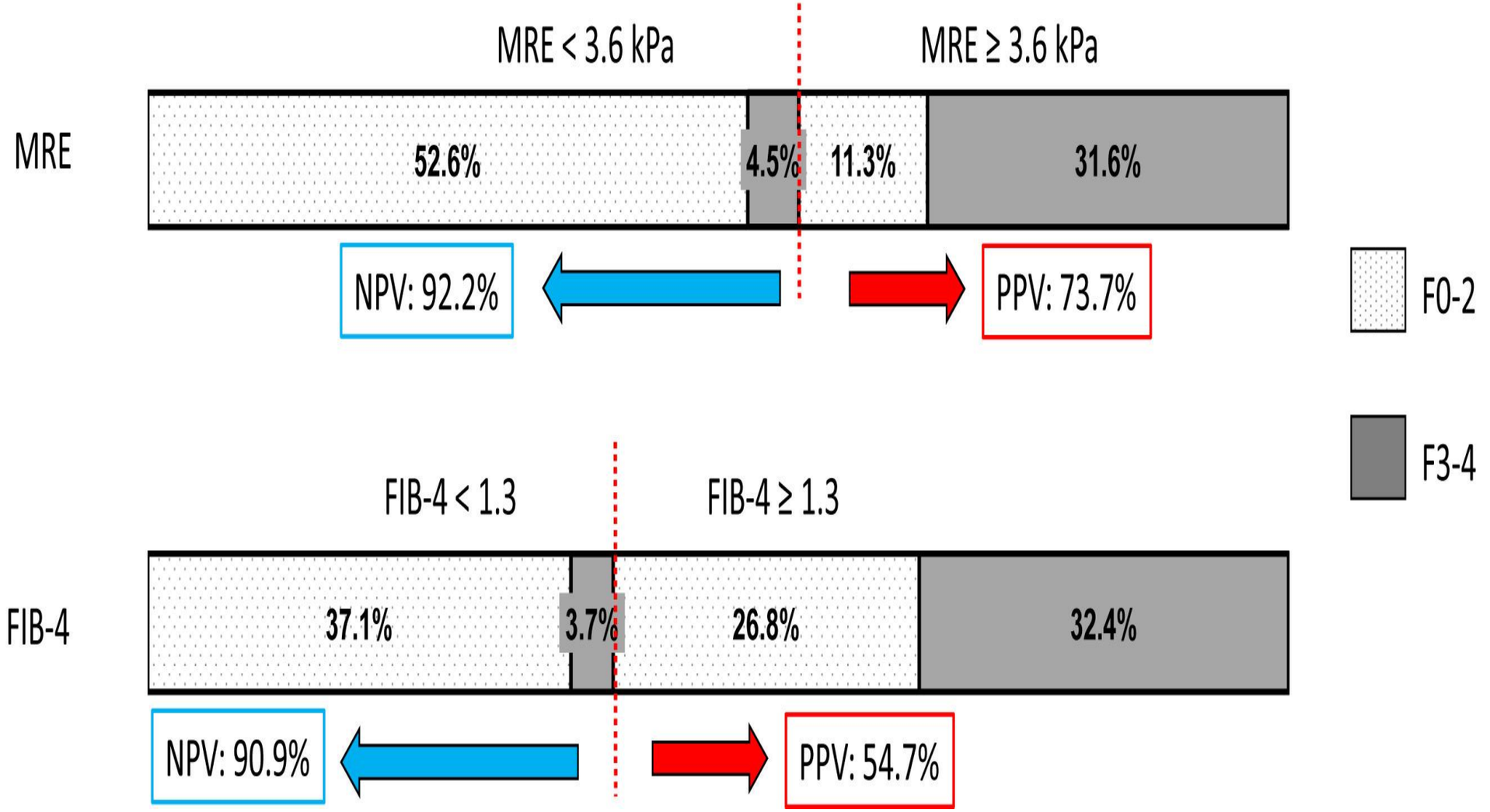


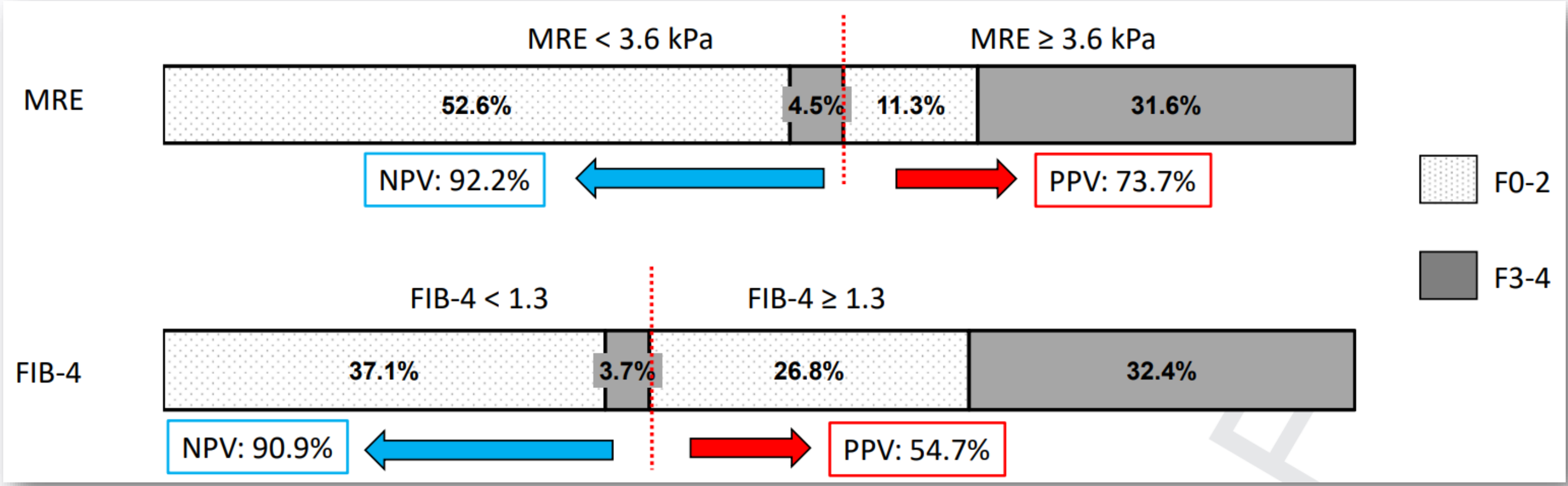
Two-Step Strategy, FIB-4 Followed by Magnetic Resonance Elastography, for Detecting Advanced Fibrosis in NAFLD

Nobuharu Tamaki,[*,‡] Kento Imajo,[§,‖] Suzanne R. Sharpton,[*] Jinho Jung,[*] Nancy Sutter,[*] Nobuyoshi Kawamura,[§,‖] Masato Yoneda,[§] Mark A. Valasek,[¶] Cynthia Behling,[#] Claude B. Sirlin,[**] Masayuki Kurosaki,[‡] Namiki Izumi,[‡] Atsushi Nakajima,[§] and Rohit Loomba[*,‡‡]



Clin Gastroenterol Hepatol 2022, Febrero 27


MRE < 3.6 kPa
MRE ≥ 3.6 kPa
MRE
52.6%
4.5%
11.3%
31.6%
NPV: 92.2%
PPV: 73.7%
F0-2
F3-4
FIB-4 < 1.3
FIB-4 ≥ 1.3
FIB-4
37.1%
3.7%
26.8%
32.4%
NPV: 90.9%
PPV: 54.7%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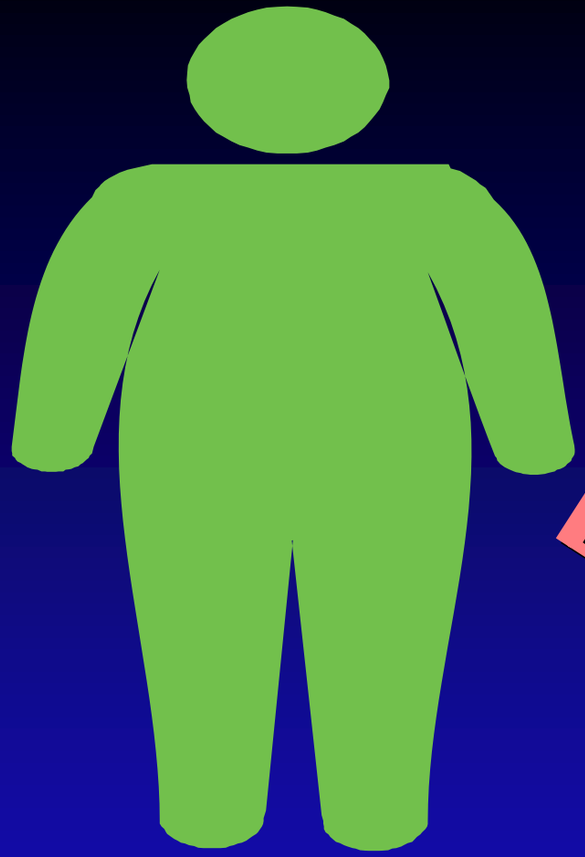


Mostrar al Médico general,
Internista, Endocrinólogo
Hay vínculo real y *Catastrófico*

Obesidad

13%	Mundo
42.4%	USA

“Enfermedad crónica, neuro-comportamental recurrente, incurable, un aumento de la grasa corporal, Disfunción tisular, con efectos adversos metabólicos, bioquímicos, sicosociales”

IMC ≥30 Kg M^2: grasa o músculos?

30-34.9 Kg/M^2, cintura
>102 cm Hombres
> 88 cm mujeres

% Grasa
> 25 Hombres (8-19)
>35 Mujeres (21-35)

Jirapinyo P, Am J Gastroenterol 2021; Epub ahead Abril 6
Obesity Medicine Association 2020

Hígado graso, Una “enfermedad nueva”

Thomas Addison 1836
Hígado Graso

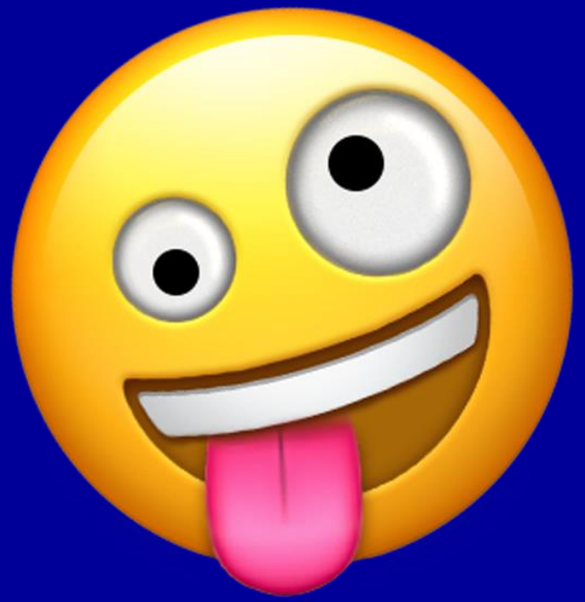
Karl Rokitansky 1839
Gra

“Lo único nuevo en la Vida es la historia que usted No conoce”

Charles Connor 1938
Diabéticos hígado graso cirrosis

***Addison T, Guys Hosp Rep*. 1836;1:485**
Rokitansky K, Wien, Austria: Carl Gerold; 1839
Pepper W, Starr L, eds. A System of Practical Medicine, Vol II. Philadelphia, PA: Lea Brothers & Co; 1885: 1050
Connor CL, et al. *Am J Pathol*. 1938;14(3):347.

Si alguien no lo sabía
No importa!
Lo que pasó…Ya pasó!!
Nunca es tarde!



>5% de hepatocitos con Infiltración grasa (histologia)
10% Resonancia Magnética

En ausencia de consumo del alcohol
Hombres 30g/día, mujeres 20g/día
Sin otra causa identificable

Hubscher, SG. Histopathology 2006; 49:450–465
Chalasani N, et al. Gastroenterology 2012;142: 1592-609
Corey KE, Dig Dis Sc 2016; Online March 16.

Gladstonemay R. WHO urges more care in naming diseases. *New York Times.* 2015.

Dejar de utilizar el sufijo NO en las enfermedades

70% de muertes Enfermedades NO comunicables

Hígado Graso NO Alcohólico

Hepatitis No A No B

Implicación del sufijo "NO"

Resta importancia a la entidad, "trivialización"

Fouad Y, et al. Liver Int. 2020 Apr 17, Epub ahead.

***NAFLD:**
Non Alcoholic Fatty Liver Disease

****MAFLD:**
Metabolic Asociated Fatty Liver Disease

Esteatosis Hepática Asociada
A Disfunción Metabólica

*Gladstonemay R. *WHO urges more care in naming diseases*. New York, NY: New York Times. 2015
**Eslam E, J Hepatol 2020 abril 20

Expert Opinion

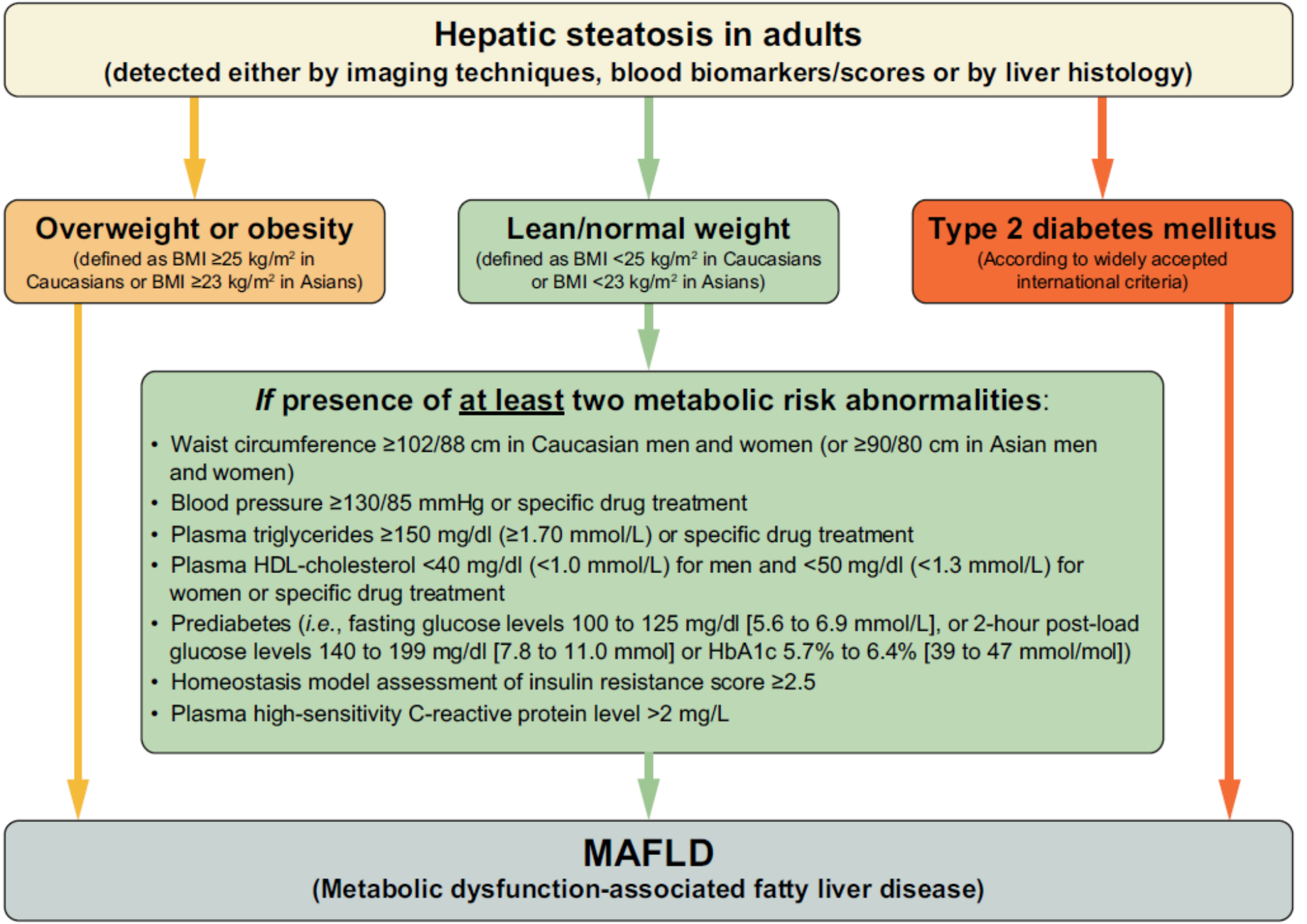
JOURNAL OF HEPATOLOGY

A new definition for metabolic dysfunction-associated fatty liver disease: An international expert consensus statement

Mohammed Eslam[1,*,†], Philip N. Newsome[2,*,†], Shiv K. Sarin[3], Quentin M. Anstee[4], Giovanni Targher[5], Manuel Romero-Gomez[6], Shira Zelber-Sagi[7], Vincent Wai-Sun Wong[8], Jean-François Dufour[9], Jörn M. Schattenberg[10], Takumi Kawaguchi[11], Marco Arrese[12], Luca Valenti[13], Gamal Shiha[14], Claudio Tiribelli[15], Hannele Yki-Järvinen[16], Jian-Gao Fan[17], Henning Grønbæk[18], Yusuf Yilmaz[19], Helena Cortez-Pinto[20], Claudia P. Oliveira[21], Pierre Bedossa[22], Leon A. Adams[23], Ming-Hua Zheng[24], Yasser Fouad[25], Wah-Kheong Chan[26], Nahum Mendez-Sanchez[27], Sang Hoon Ahn[28], Laurent Castera[29], Elisabetta Bugianesi[30], Vlad Ratziu[31,*,‡], Jacob George[1,*,‡]

Eslam M, J Hepatol. 2020 ;73:202-209

Diagnóstico Positivo



Eslam M, J Hepatol. 2020;73:202-9

Dual aetiology fatty liver disease (concomitant MAFLD and other liver disease).

Meeting the criteria for a diagnosis of MAFLD

Plus

Any other cause for liver disease *e.g.*, alcohol-use disorder defined as consumption of >3 drinks per day in men and >2 drinks per day in women, or binge drinking (defined as >5 drinks in males and >4 drinks in females, consumed over a 2 hour period)*, as defined by the National Institute of Alcoholism and Alcohol Abuse[47,62], viral infection (HIV, HBV and HCV), autoimmune hepatitis, inherited liver disorders, drug-induced liver injury or other known liver disease

Puede empeorar otras enfermedades Hepáticas crónicas Pre existentes, Autoinmune, hepatitis virales, etc

Eslam M, J Hepatol. 2020;73:202-9

nafld - Search Results - PubMed

pubmed.ncbi.nlm.nih.gov/?term=nafld&sort=date&size=100

PubMed.gov

nafld

Search

Advanced Create alert Create RSS User Guide

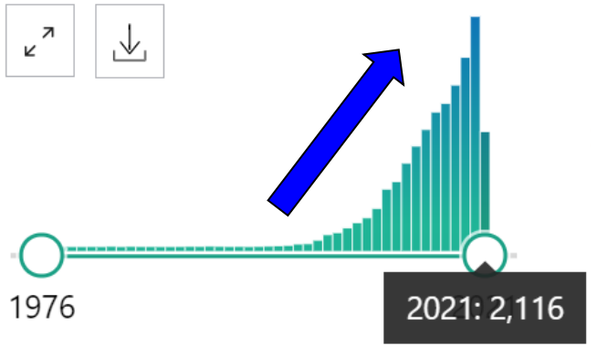
Save Email Send to Sorted by: Most recent Display options

MY NCBI FILTERS

25,043 results

Junio 7,2021

RESULTS BY YEAR



TEXT AVAILABILITY

- Abstract
- Free full text

1 Cite Share

A Model of Experimental Steatosis In Vitro: Hepatocyte Cell Culture in Lipid Overload-Conditioned Medium.

Campos-Espinosa A, Guzmán C.

J Vis Exp. 2021 May 18;(171). doi: 10.3791/62543.

PMID: 34096925

Metabolic dysfunction-associated **fatty liver disease** (MAFLD), previously known as **non-alcoholic fatty liver disease** (**NAFLD**), is the most prevalent **liver disease** worldwide due to its relationship with obe ...

2 Cite Share

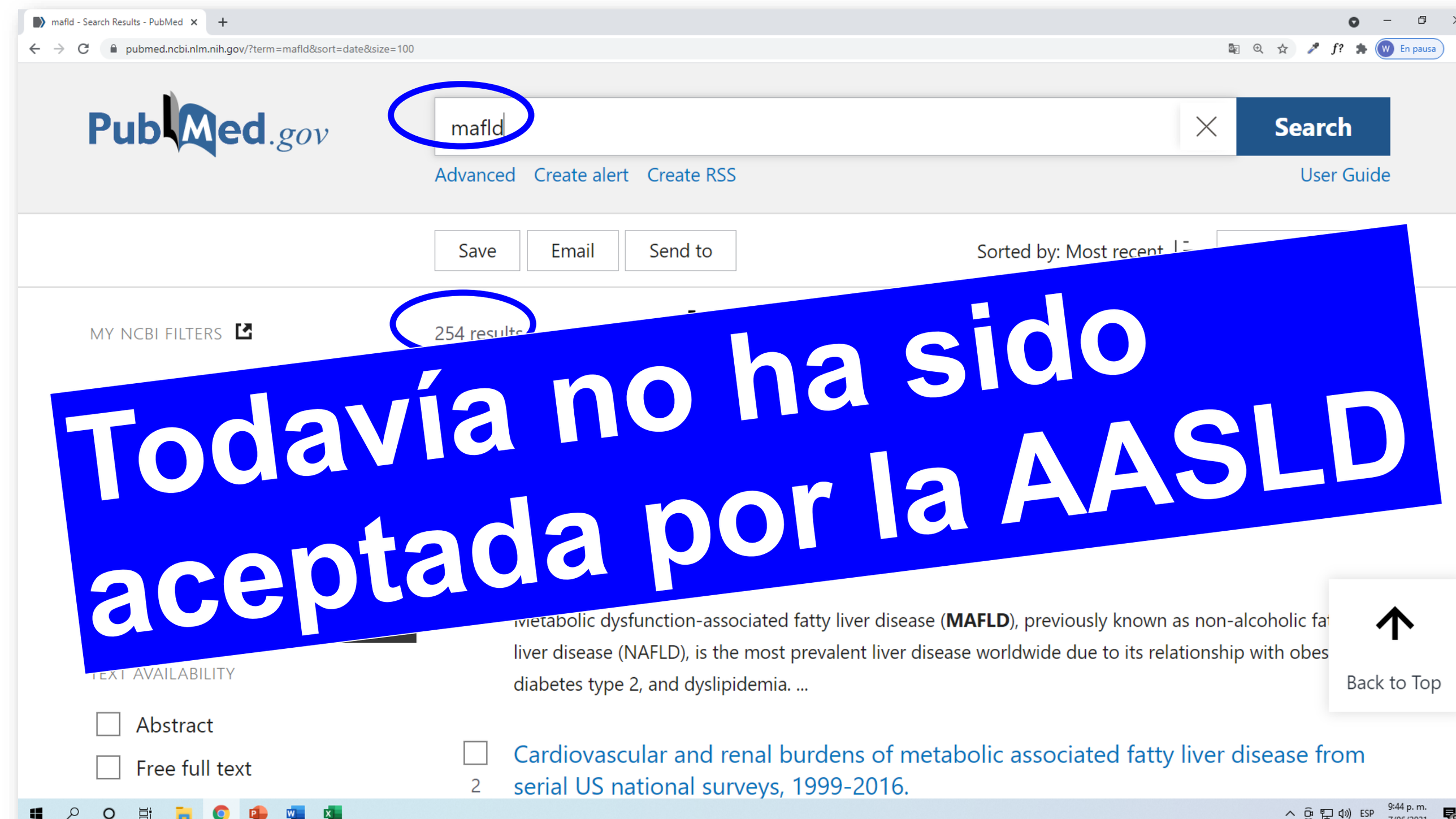
The association between hypertension and nonalcoholic **fatty liver disease** (**NAFLD**): literature evidence and systems biology analysis.

Ma C, Yan K, Wang Z, Zhang Q, Gao L, Xu T, Sai J, Cheng F, Du Y.

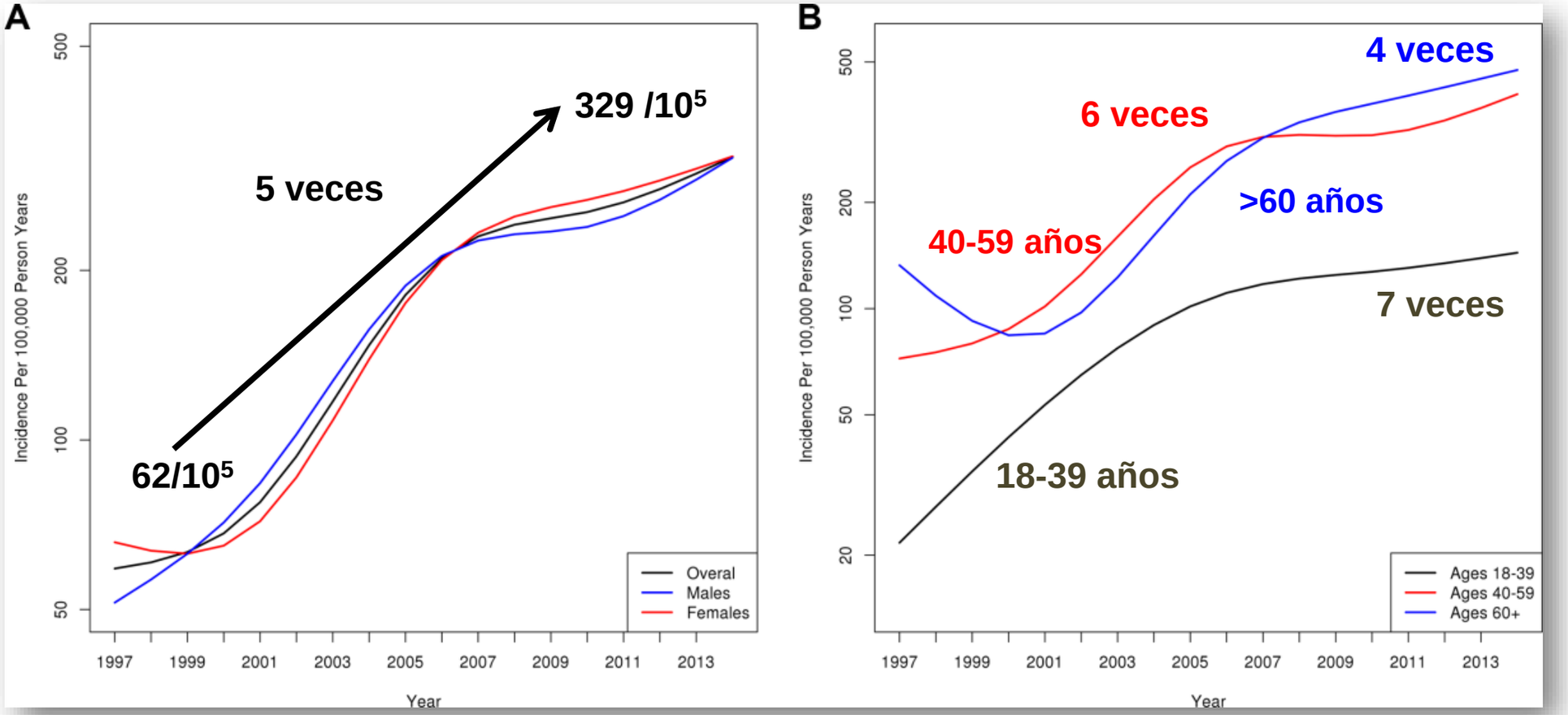
Bioengineered. 2021 Dec;12(1):2187-2202. doi: 10.1080/21655979.2021.1933302.

PMID: 34096467

ESP 9:41 p. m. 7/06/2021


mafld - Search Results - PubMed
pubmed.ncbi.nlm.nih.gov/?term=mafld&sort=date&size=100
En pausa
PubMed.gov
mafld
Search
Advanced
Create alert
Create RSS
User Guide
Save
Email
Send to
Sorted by: Most recent
MY NCBI FILTERS
254 results
Todavía no ha sido aceptada por la AASLD
metabolic dysfunction-associated fatty liver disease (MAFLD), previously known as non-alcoholic fa
liver disease (NAFLD), is the most prevalent liver disease worldwide due to its relationship with obes
diabetes type 2, and dyslipidemia. ...
TEXT AVAILABILITY
Abstract
Free full text
2
Cardiovascular and renal burdens of metabolic associated fatty liver disease from serial US national surveys, 1999-2016.
Back to Top
ESP
9:44 p. m.

NAFLD: incidencia ajustada, Olmsted, Minnesota

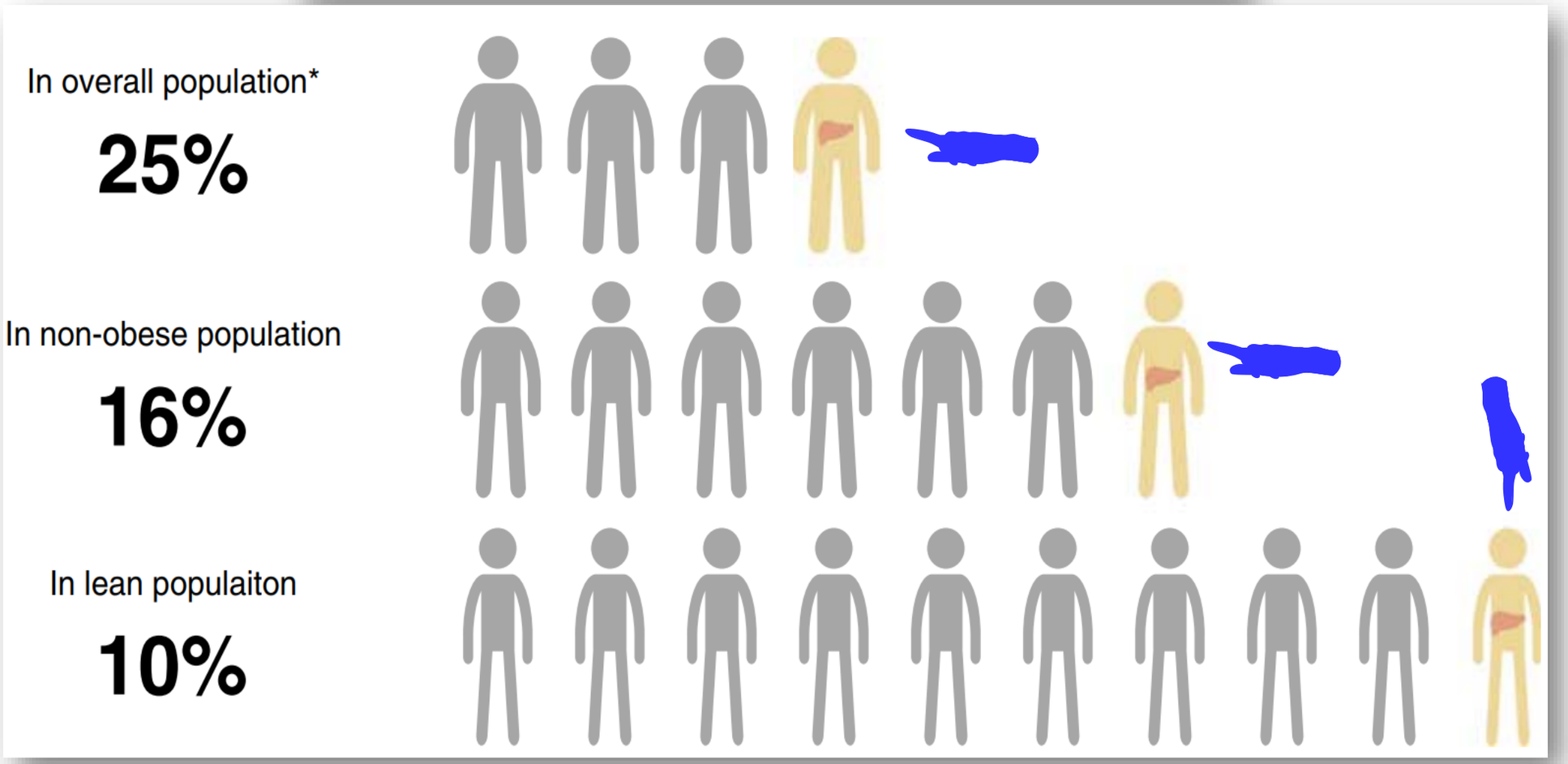


Allen AM, Hepatology 2018;67:1726-1736

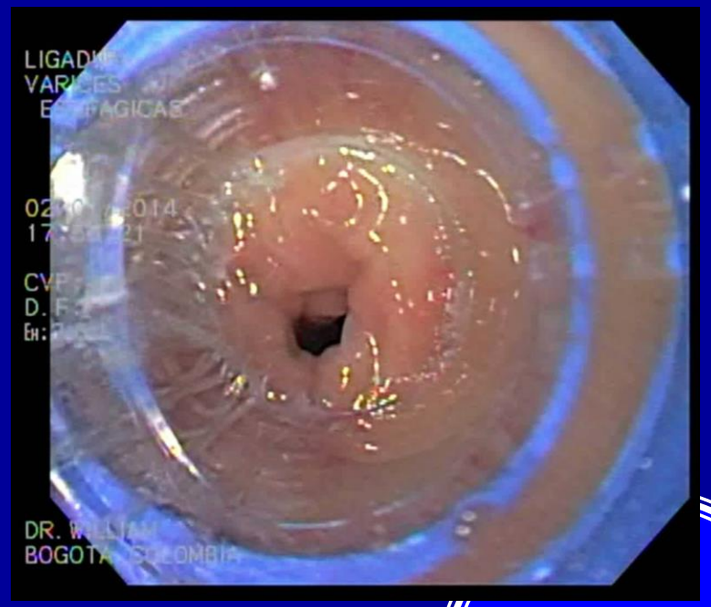
The Prevalence of Lean/Nonobese Nonalcoholic Fatty Liver Disease

A Systematic Review and Meta-Analysis

Yiwen Shi, MD, Qianyi Wang, MD, Yameng Sun, MD, PhD, Xinyan Zhao, MD, PhD, Yuanyuan Kong, PhD, Xiaojuan Ou, MD, Jidong Jia, MD, PhD, Shanshan Wu, PhD, and Hong You, MD, PhD



J Clin Gastroenterol 2019;00:000–000. Epub ahead Dic 2019



Cirrosis Criptogènica

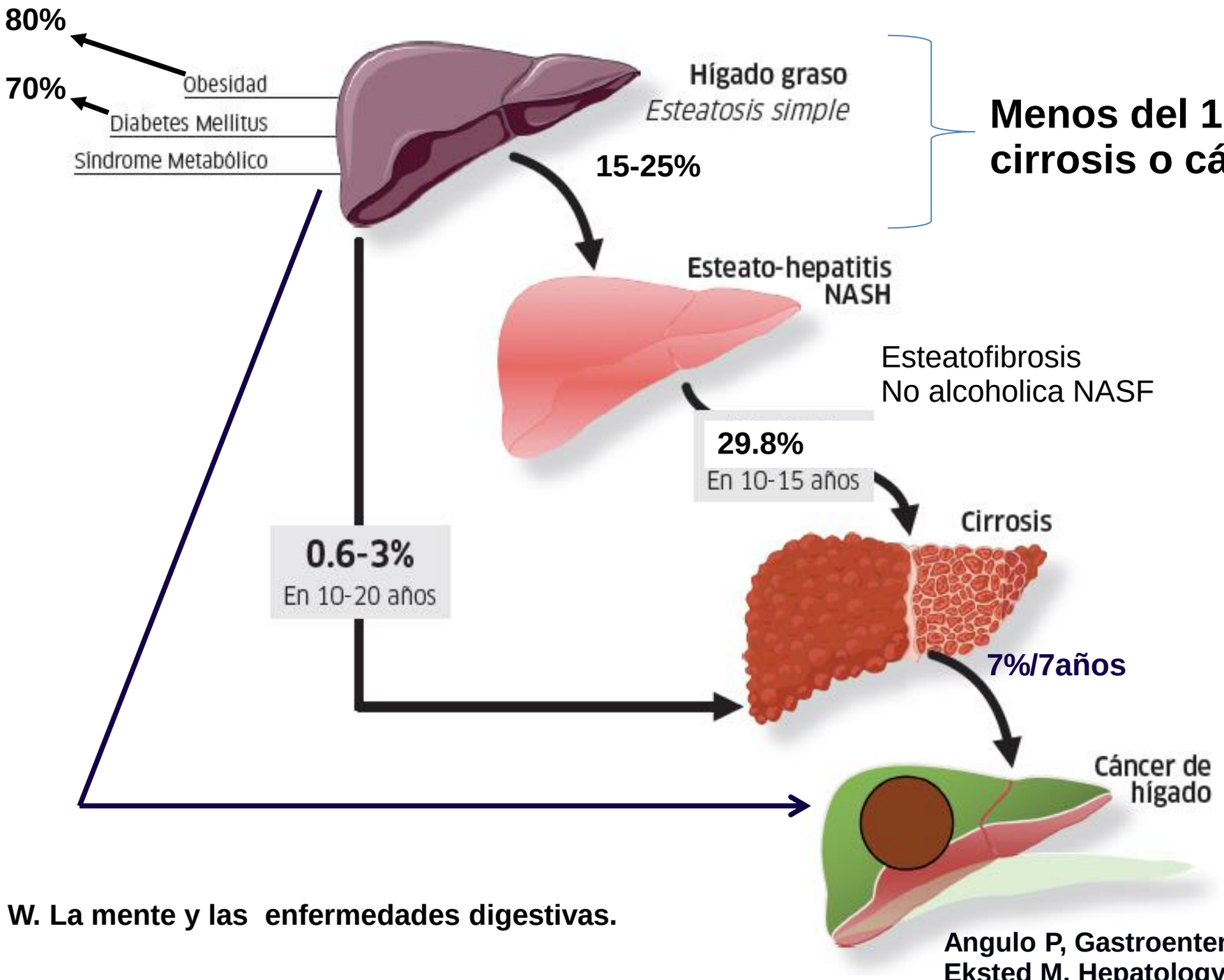
ALT

MAFLD

Principal Causa Hepatitis Crónica

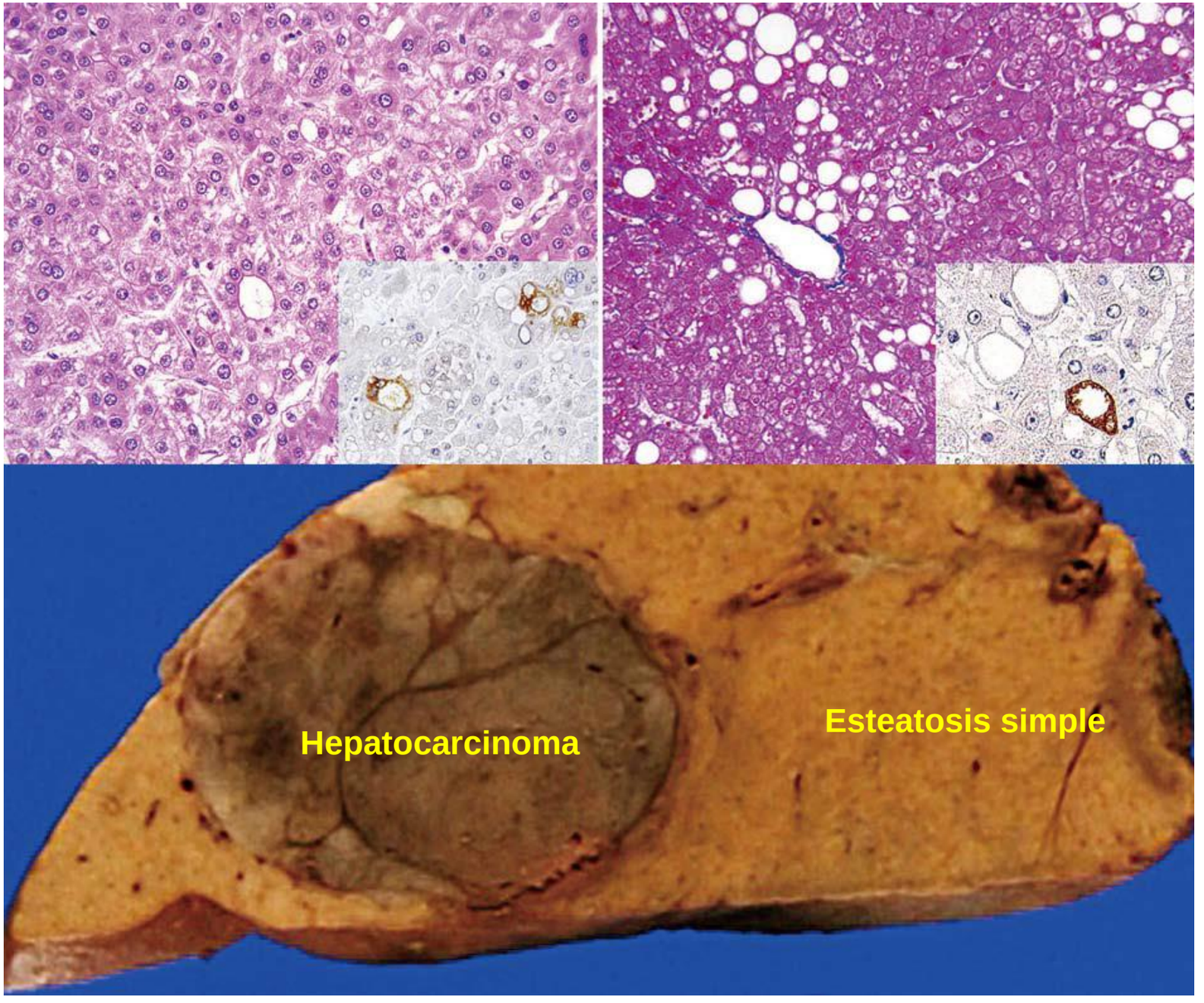
Trasplante hepático
1ª Causa Mujeres
2ª Global

Samji NS, J Clin Exp Hepatol 2019;9:497-505



Alvarez P, Otero W. La mente y las enfermedades digestivas. Bogotá 2016

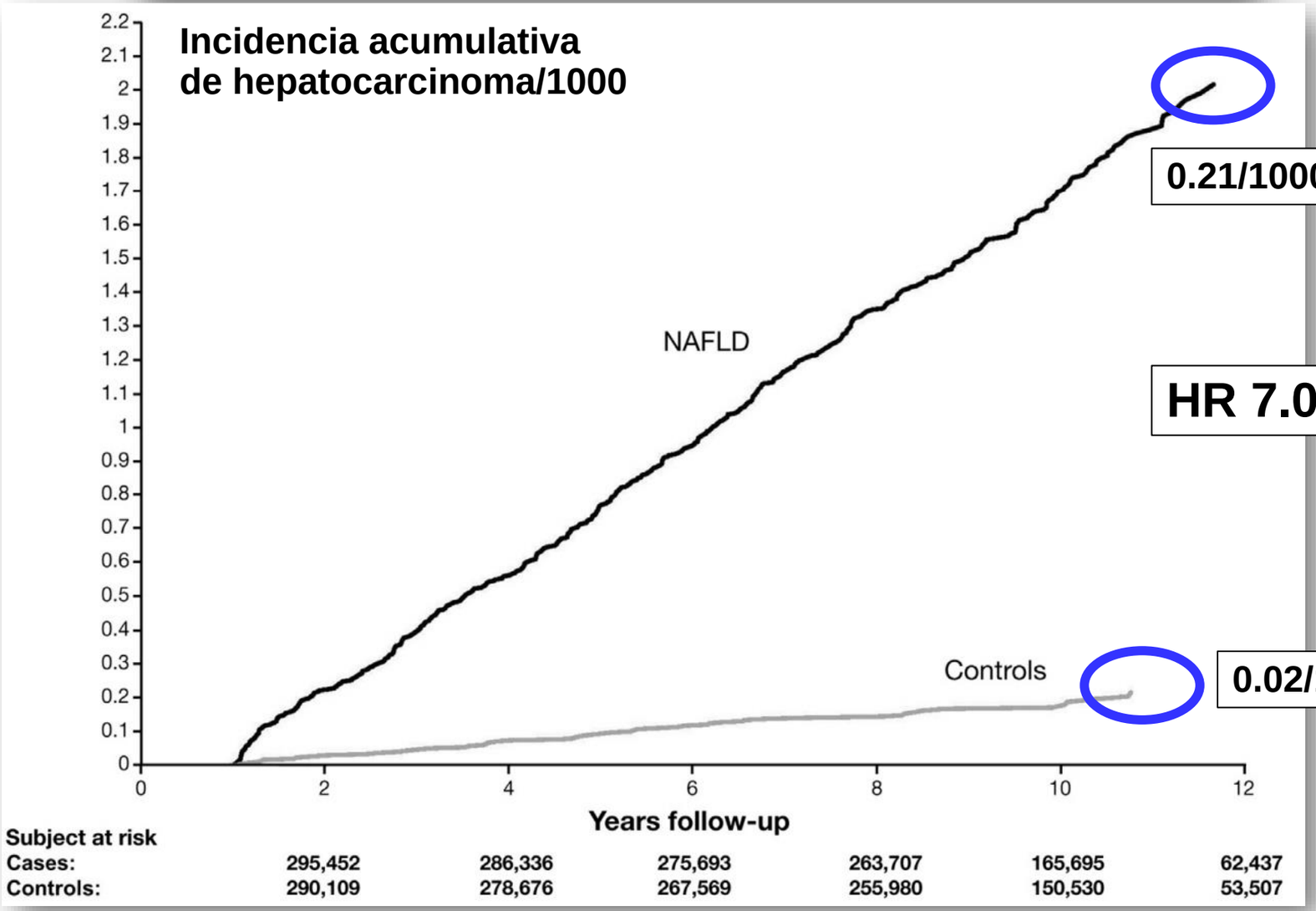
Angulo P, Gastroenterology 2015;149:389-97
Eksted M, Hepatology 2015;61:1547-54


Hepatocarcinoma
Esteatosis simple

Risk of Hepatocellular Cancer in Patients With Non-Alcoholic Fatty Liver Disease

Fasiha Kanwal,[1,2,3] Jennifer R. Kramer,[2,3] Srikar Mapakshi,[2,3] Yamini Natarajan,[1] Maneerat Chayanupatkul,[1] Peter A. Richardson,[2,3] Liang Li,[4] Roxanne Desiderio,[2,3] Aaron P. Thrift,[1,5,6] Steven M. Asch,[7,8] Jinna Chu,[2] and Hashem B. El-Serag[1,2,3]

CHC 4900
2.300.000
Personas/año

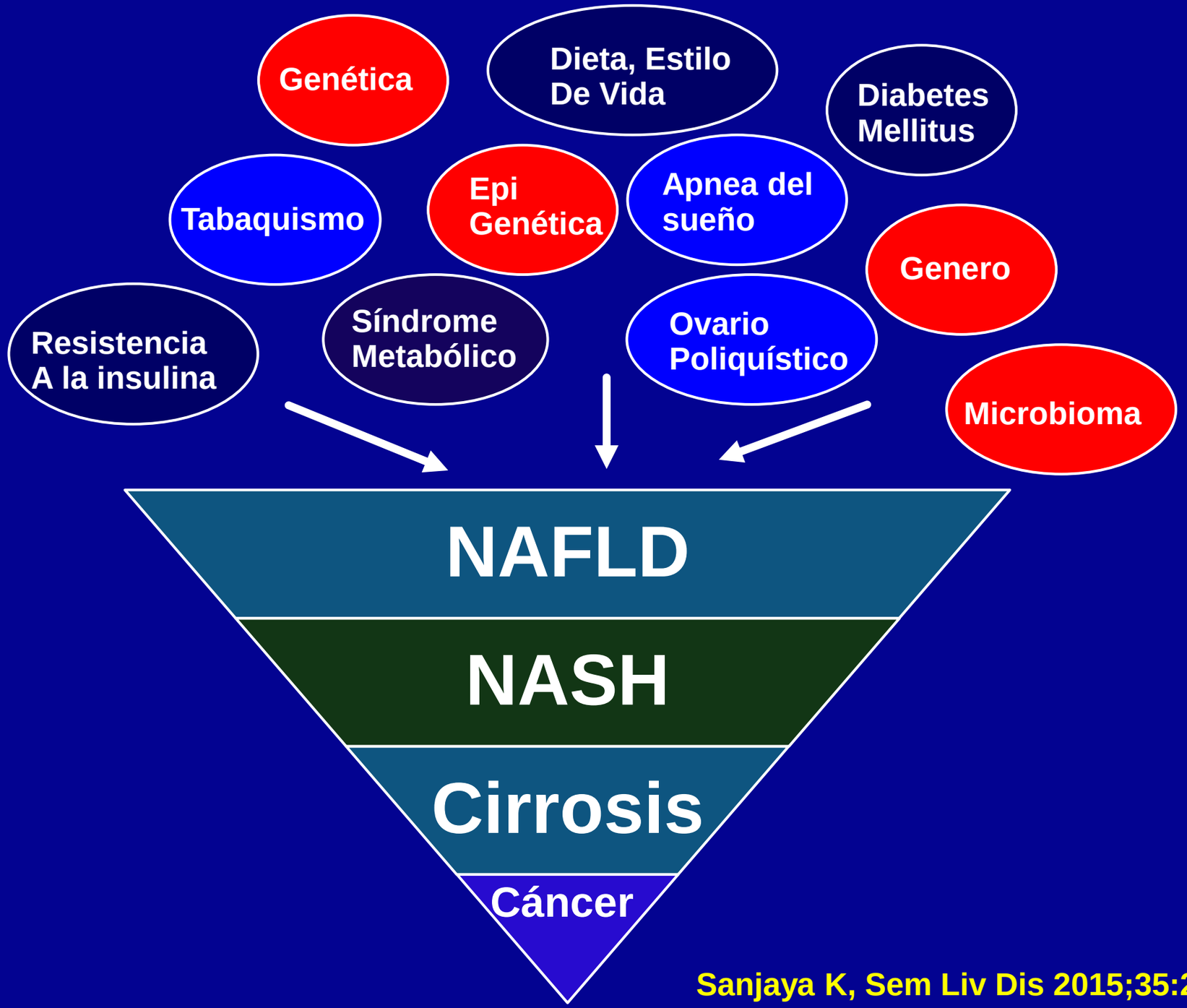


0.21/1000 Personas/año

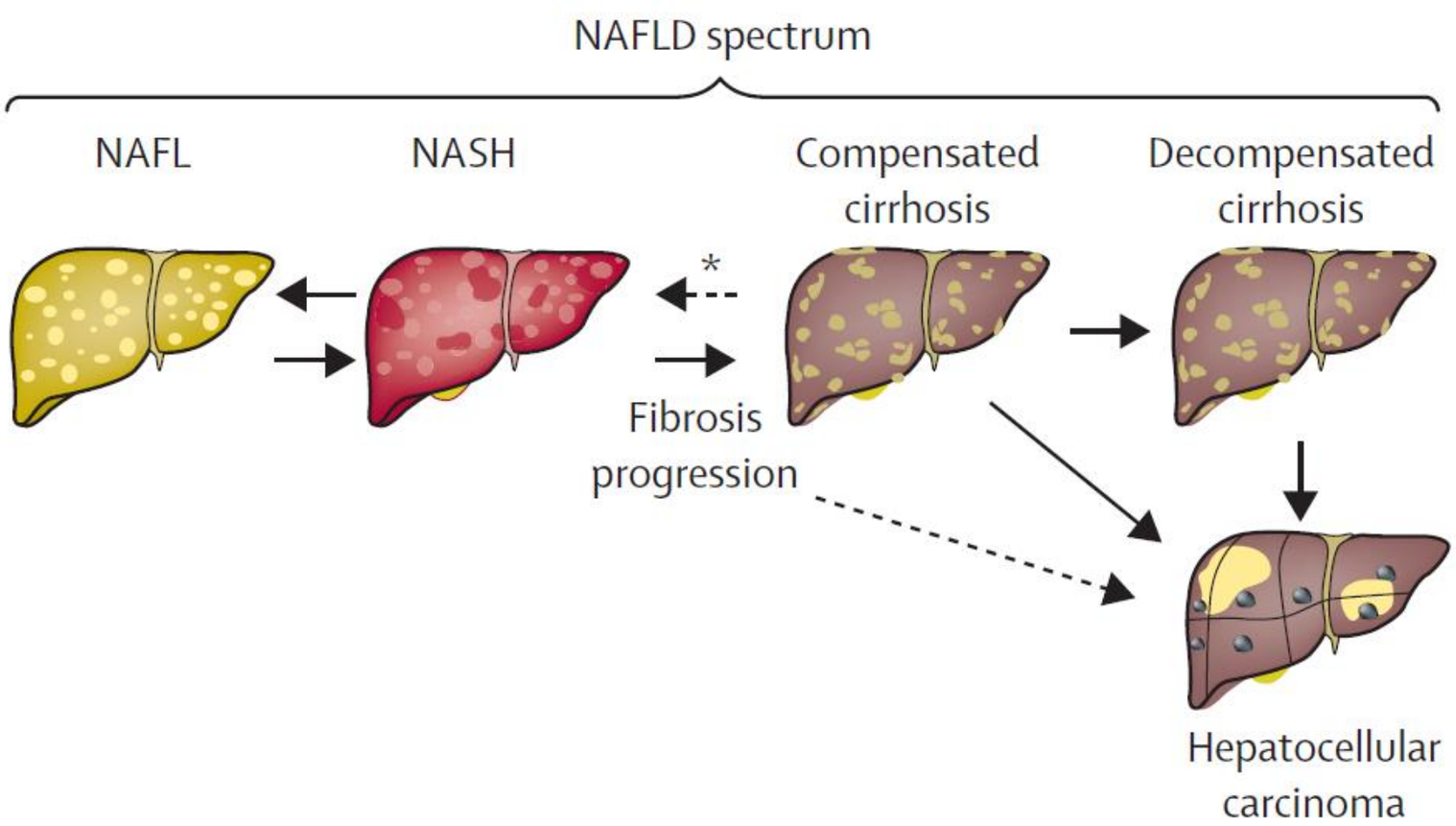
HR 7.02 (5.76-10.08

0.02/1000 Personas/año

Gastroenterology 2018;155:1828–1837



Sanjaya K, Sem Liv Dis 2015;35:21-35



Factors associated with NAFLD and NASH progression

Comorbid illness
- Type 2 diabetes
- Insulin resistance
- Dyslipidaemia
- Obesity
- Hypertension
- Hypopituitarism

Genetic factors
- *PNPLA3*
- *TM6SF2*
- *GCKR*
- *MBOAT7*
- ***HSD17B13***

Environmental factors
- Fructose
- Cholesterol
- Alcohol
- **Exercise**
- **Coffee**

Powel EE, Lancet. 2021 Jun 5;397(10290):2212-24.

Osteoporosis

Artrosis rodilla

Artrosis Cadera

Cáncer de Seno

Pancreatitis Crónica

Pancreatitis Aguda

Cáncer de Utero

Reflujo Gastroesofágico

Cáncer de Hígado

Apnea Del sueño

Cáncer de Páncreas

Insuf Rena

de

Hipe Arter

de

Trom cere

o

Infarto Miocardio

de Riñón

Infarto Intestinal

Primera causa de cirrosis
Primera causa de trasplante de hígado en mujeres

Diabetes Mellitus

Resistencia Insulina

Ovario Poliquístico

Diarrea Crónica

NAFLD/NASH: Mortalidad

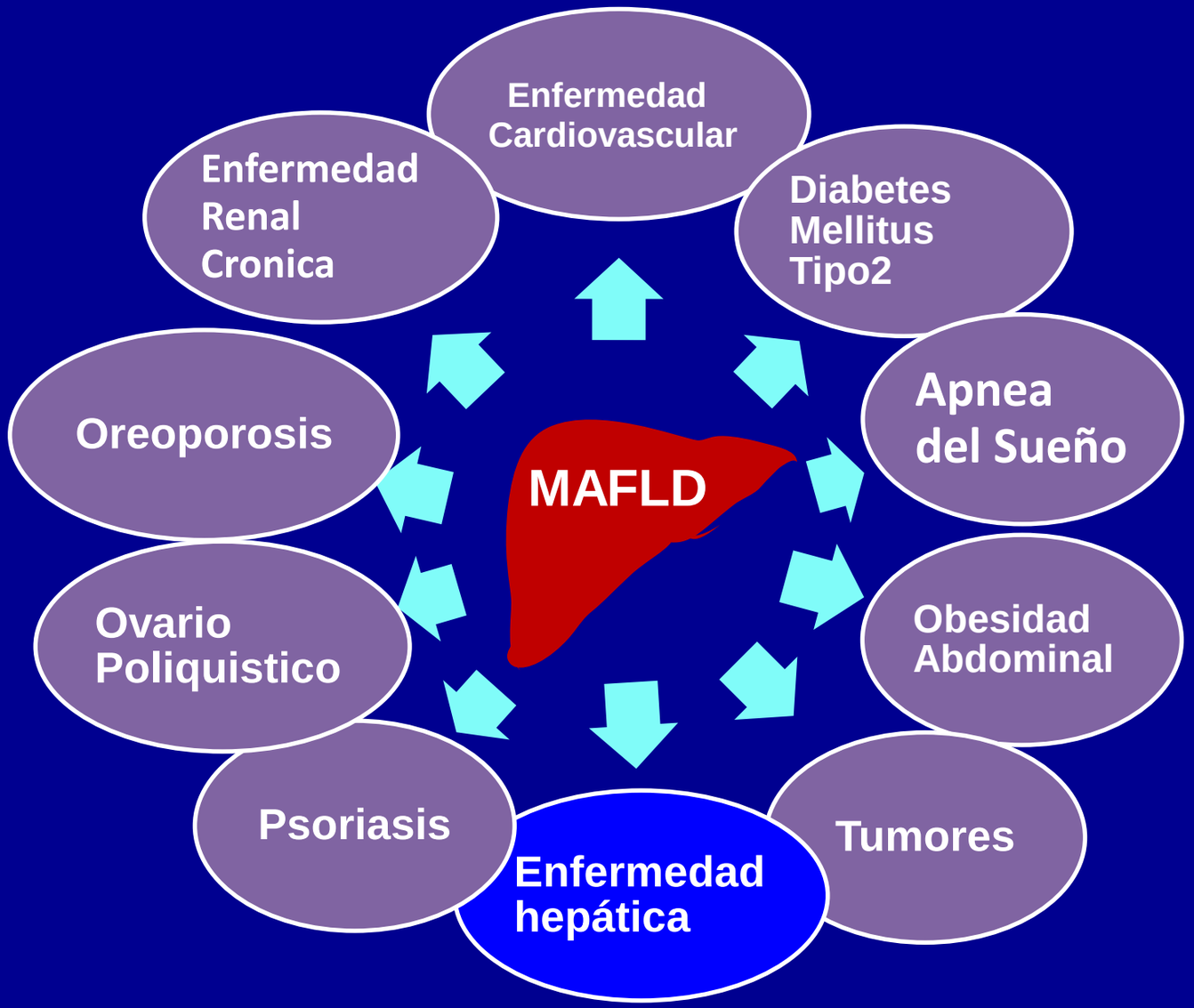
Enfermedad Cardiovascular 13-30%

Tumores 6-28%

Hígado 2.8-19%

Pagada MR, Clin Liv Dis 2012;16:487-504

MAFLD, Enfermedad Sistémica del Internista



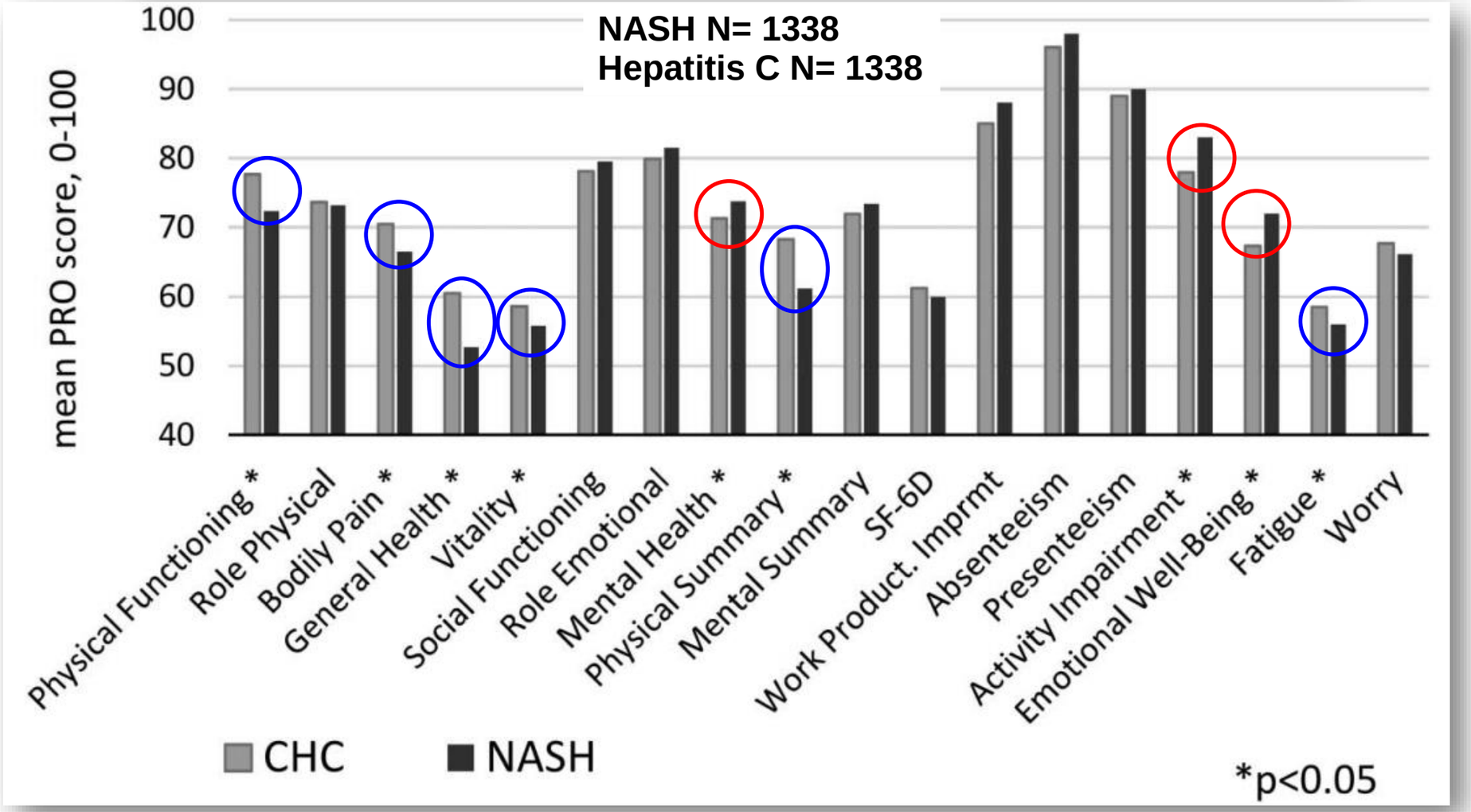
Adams LA, Gut 2017, On Line DOI 10.1136/gutjnl

Manifestaciones clínicas

Asintomática ?

Patients With Nonalcoholic Steatohepatitis Experience Severe Impairment of Health-Related Quality of Life

Zobair M. Younossi, MD, MPH[1,2], Maria Stepanova, PhD[3], Eric J. Lawitz, MD[4], K. Rajender Reddy, MD[5], Vincent Wai-Sun Wong, MD[6], Alessandra Mangia, MD[7], Andrew J. Muir, MD[8], Ira Jacobson, MD[9], C. Stephen Djedjos, MD[10], Anuj Gaggar, MD, PhD[10], Robert P. Myers, MD[10], Issah Younossi, MS[3], Fatema Nader, MS[3] and Andrei Racila, MS[3]



Am J Gastroenterol 2019;114:1636–1641

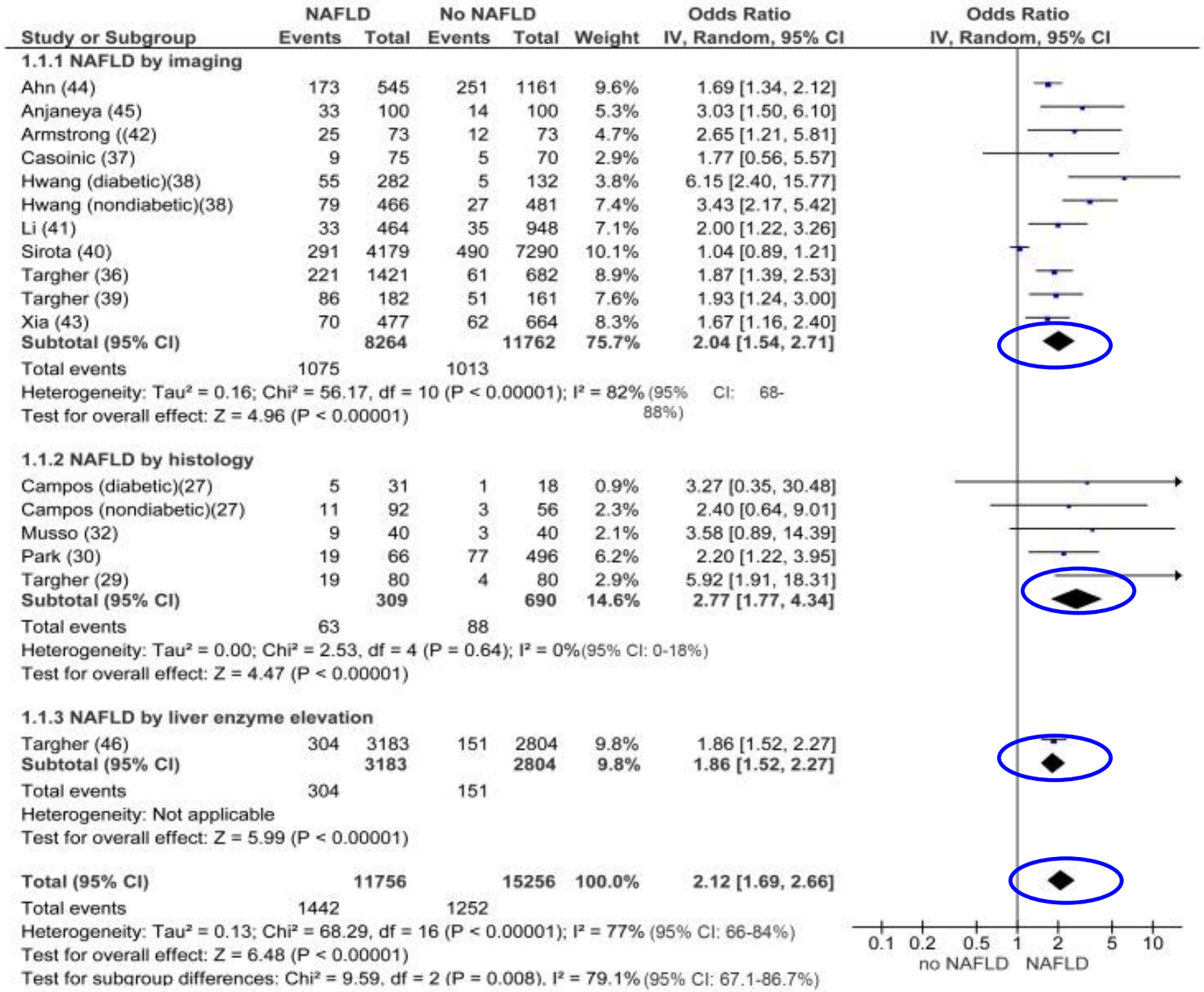
Nonalcoholic Fatty Liver Disease Contributes to Subclinical Atherosclerosis: A Systematic Review and Meta-Analysis

Yao-Yao Zhou,[1] Xiao-Dong Zhou,[2] Sheng-Jie Wu,[2] Dan-Hong Fan,[2] Sven Van Poucke,[3] Yong-Ping Chen,[4,5] Shen-Wen Fu,[1] and Ming-Hua Zheng [4,5]

OR 1.74 (IC95% 1.47-2.06)

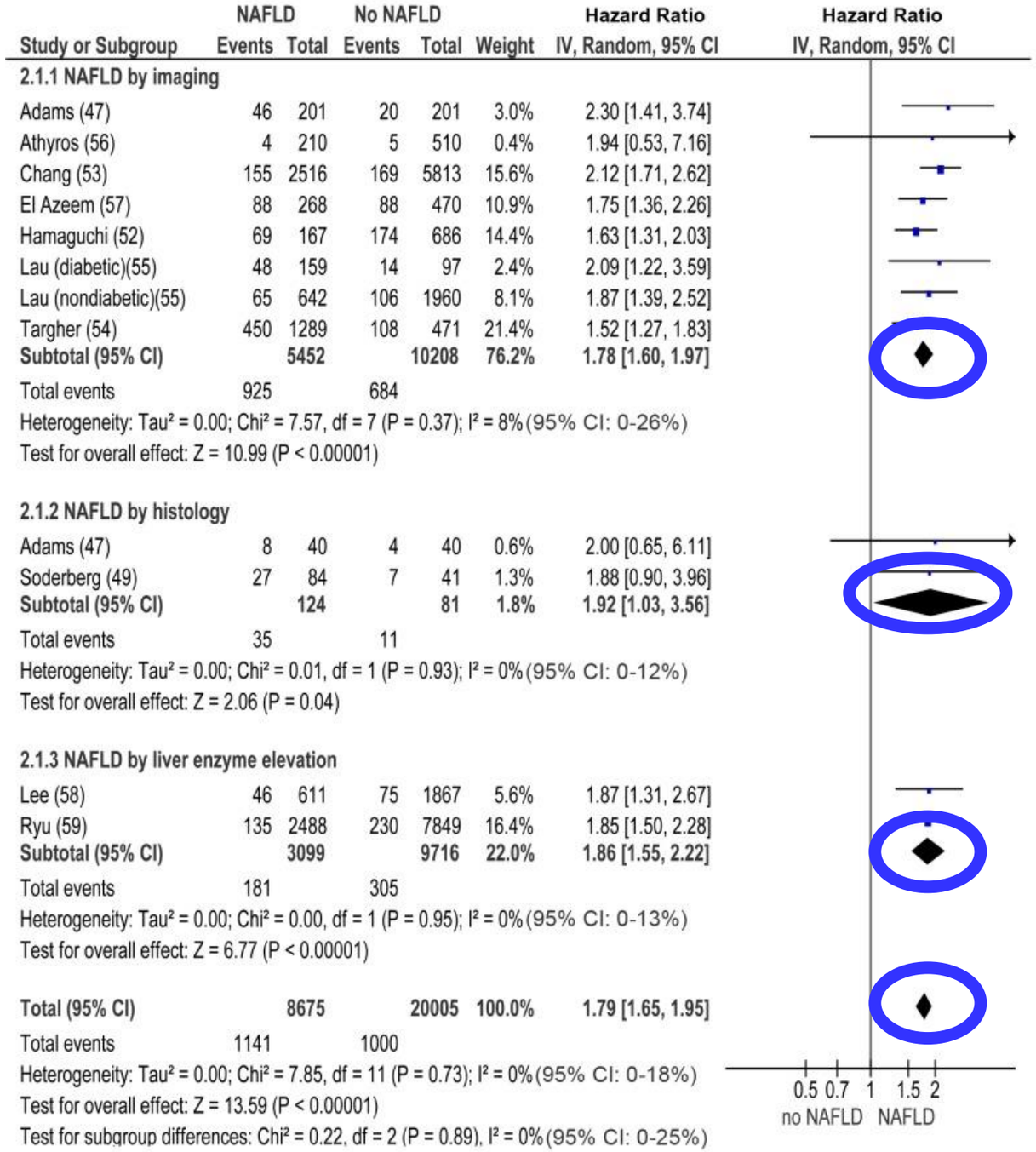
Hepatology Communications 2018;2:376-392

NAFLD/IRC Prevalencia



Study or Subgroup	NAFLD Events	NAFLD Total	No NAFLD Events	No NAFLD Total	Weight	Odds Ratio IV, Random, 95% CI
1.1.1 NAFLD by imaging						
Ahn (44)	173	545	251	1161	9.6%	1.69 [1.34, 2.12]
Anjaneya (45)	33	100	14	100	5.3%	3.03 [1.50, 6.10]
Armstrong ((42)	25	73	12	73	4.7%	2.65 [1.21, 5.81]
Casoinic (37)	9	75	5	70	2.9%	1.77 [0.56, 5.57]
Hwang (diabetic)(38)	55	282	5	132	3.8%	6.15 [2.40, 15.77]
Hwang (nondiabetic)(38)	79	466	27	481	7.4%	3.43 [2.17, 5.42]
Li (41)	33	464	35	948	7.1%	2.00 [1.22, 3.26]
Sirota (40)	291	4179	490	7290	10.1%	1.04 [0.89, 1.21]
Targher (36)	221	1421	61	682	8.9%	1.87 [1.39, 2.53]
Targher (39)	86	182	51	161	7.6%	1.93 [1.24, 3.00]
Xia (43)	70	477	62	664	8.3%	1.67 [1.16, 2.40]
Subtotal (95% CI)		**8264**		**11762**	**75.7%**	**2.04 [1.54, 2.71]**
Total events	1075		1013			
Heterogeneity: Tau² = 0.16; Chi² = 56.17, df = 10 (P < 0.00001); I² = 82% (95% CI: 68-88%)						
Test for overall effect: Z = 4.96 (P < 0.00001)						
1.1.2 NAFLD by histology						
Campos (diabetic)(27)	5	31	1	18	0.9%	3.27 [0.35, 30.48]
Campos (nondiabetic)(27)	11	92	3	56	2.3%	2.40 [0.64, 9.01]
Musso (32)	9	40	3	40	2.1%	3.58 [0.89, 14.39]
Park (30)	19	66	77	496	6.2%	2.20 [1.22, 3.95]
Targher (29)	19	80	4	80	2.9%	5.92 [1.91, 18.31]
Subtotal (95% CI)		**309**		**690**	**14.6%**	**2.77 [1.77, 4.34]**
Total events	63		88			
Heterogeneity: Tau² = 0.00; Chi² = 2.53, df = 4 (P = 0.64); I² = 0% (95% CI: 0-18%)						
Test for overall effect: Z = 4.47 (P < 0.00001)						
1.1.3 NAFLD by liver enzyme elevation						
Targher (46)	304	3183	151	2804	9.8%	1.86 [1.52, 2.27]
Subtotal (95% CI)		**3183**		**2804**	**9.8%**	**1.86 [1.52, 2.27]**
Total events	304		151			
Heterogeneity: Not applicable						
Test for overall effect: Z = 5.99 (P < 0.00001)						
Total (95% CI)		**11756**		**15256**	**100.0%**	**2.12 [1.69, 2.66]**
Total events	1442		1252			
Heterogeneity: Tau² = 0.13; Chi² = 68.29, df = 16 (P < 0.00001); I² = 77% (95% CI: 66-84%)						
Test for overall effect: Z = 6.48 (P < 0.00001)						
Test for subgroup differences: Chi² = 9.59, df = 2 (P = 0.008), I² = 79.1% (95% CI: 67.1-86.7%)						

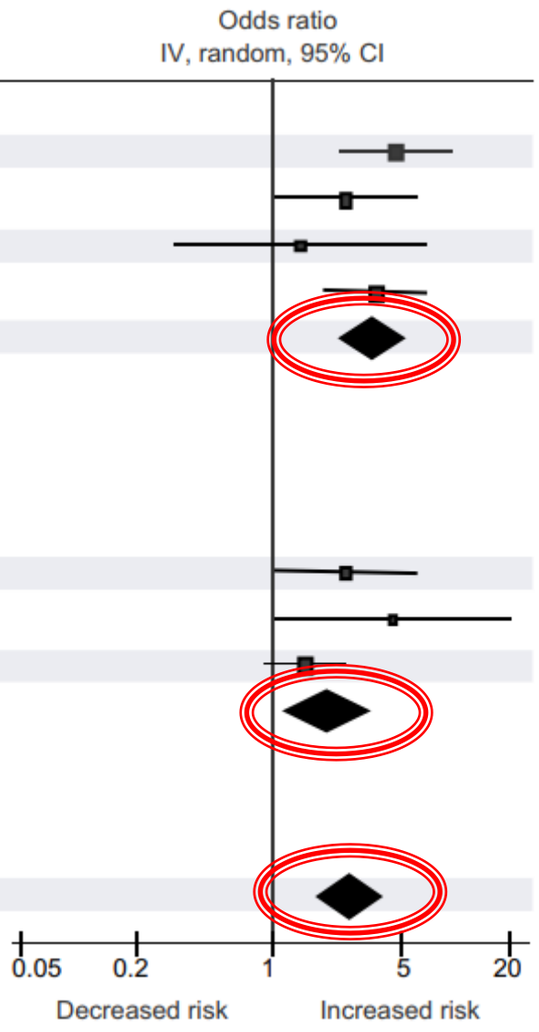
NAFLD/IRC Incidencia



NAFLD: Enfermedad cardiovascular, Meta-análisis

SEVERO: NASH, Fibrosis, > enzimas

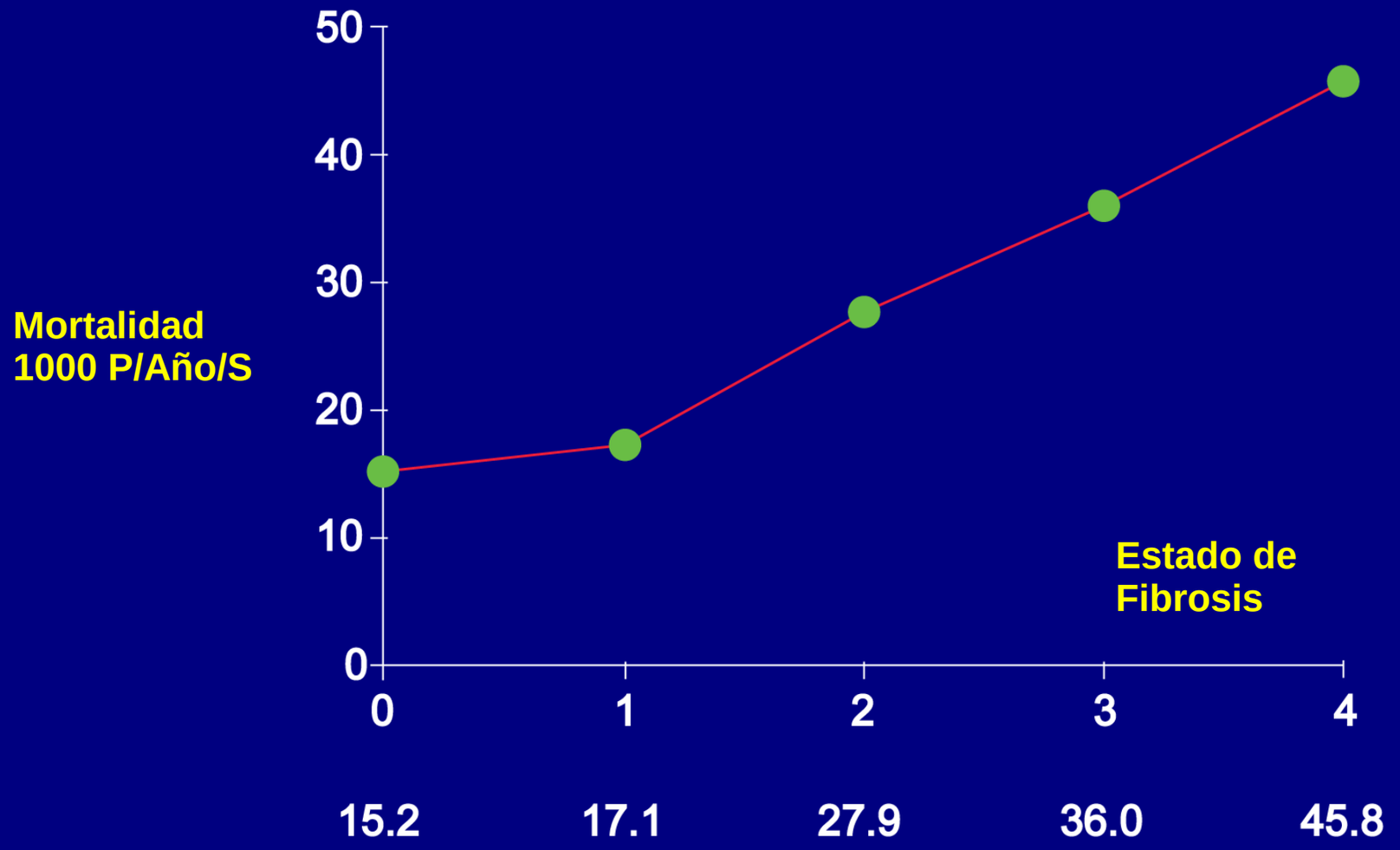
Study or subgroup	log [odds ratio]	SE	Weight	Odds ratio IV, random, 95% CI
Fatal CVD events (only)				
Ekstedt 2015	1.472	0.328	18.1%	4.36 [2.29, 8.30]
Haring 2009 men	0.879	0.423	13.3%	2.41 [1.05, 5.53]
Haring 2009 women	0.343	0.756	5.4%	1.41 [0.32, 6.21]
Kim 2013	1.241	0.303	19.7%	3.46 [1.91, 6.27]
Subtotal (95% CI)			**56.5%**	**3.28 [2.26, 4.77]**
Heterogeneity: Tau² = 0.00; Chi² = 2.56, df = 3 (*p* = 0.47); I² = 0%				
Test for overall effect: Z = 6.23 (*p* <0.00001)				
Fatal and non-fatal CVD events (combined endpoint)				
Emre 2015	0.896	0.422	13.3%	2.45 [1.07, 5.61]
Moon 2015	1.442	0.710	6.0%	4.23 [1.05, 17.04]
Pisto 2014	0.398	0.240	24.2%	1.49 [0.93, 2.39]
Subtotal (95% CI)			**43.5%**	**1.94 [1.17, 3.21]**
Heterogeneity: Tau² = 0.05; Chi² = 2.59, df = 2 (*p* = 0.27); I² = 23%				
Test for overall effect: Z = 2.59 (*p* = 0.010)				
Total (95% CI)			**100.0%**	**2.58 [1.78, 3.75]**
Heterogeneity: Tau² = 0.09; Chi² = 9.77, df = 6 (*p* = 0.13); I² = 39%				
Test for overall effect: Z = 5.00 (*p* <0.00001)				
Test for subgroup differences: Chi² = 2.71, df = 1 (*p* = 0.10), I² = 63.1%				



Targher G, J Hepatol 2016:65:589–600

NAFLD/Fibrosis

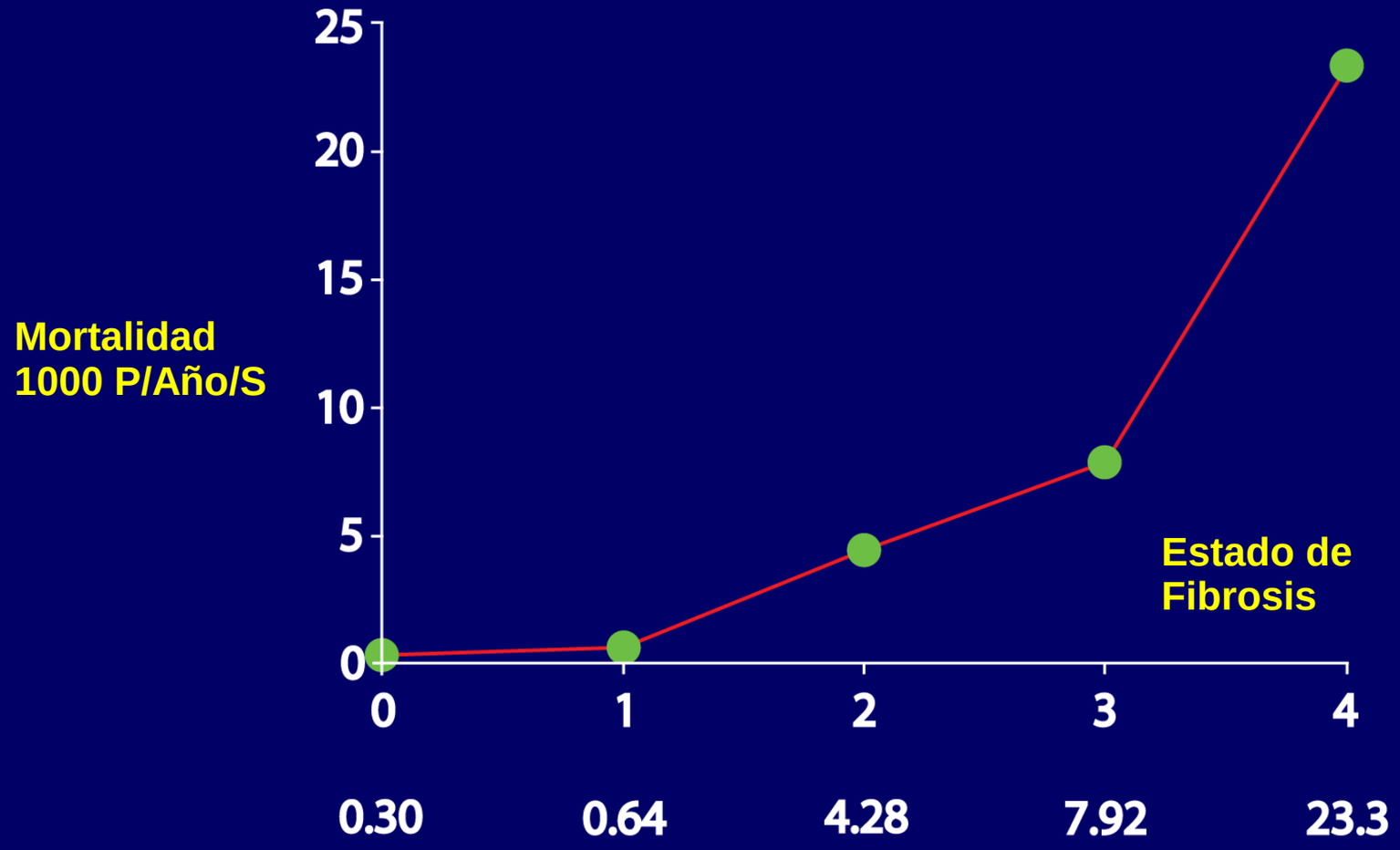
Todas las causas de Mortalidad



Dulai PS, Hepatology 2017;65:1557-65

NAFLD/Fibrosis

Mortalidad por patología hepática



Dulai PS, Hepatology 2017;65:1557-65

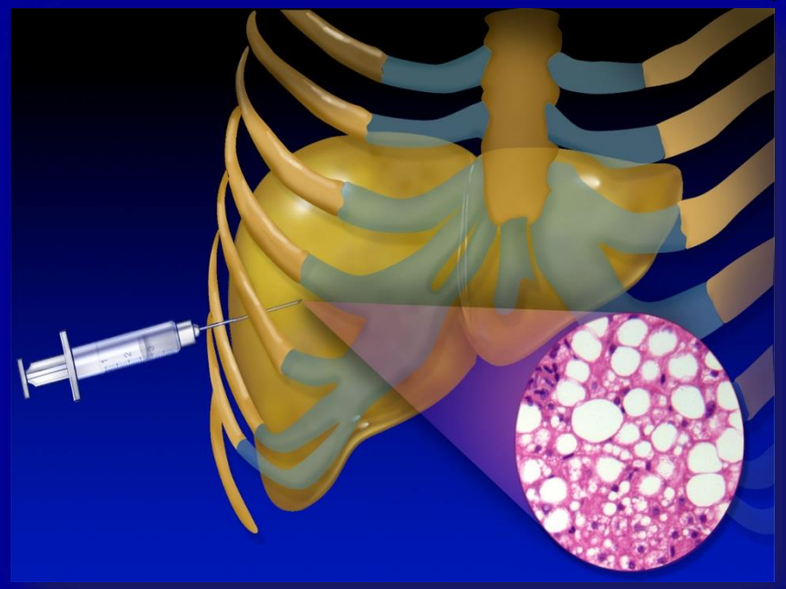
Severidad del compromiso hepático

MAFL
Esteatosis simple

MASH
Esteato hepatitis

MASF
EstatoFibrosis

Biopsia hepática
Único método



Biopsia hepática

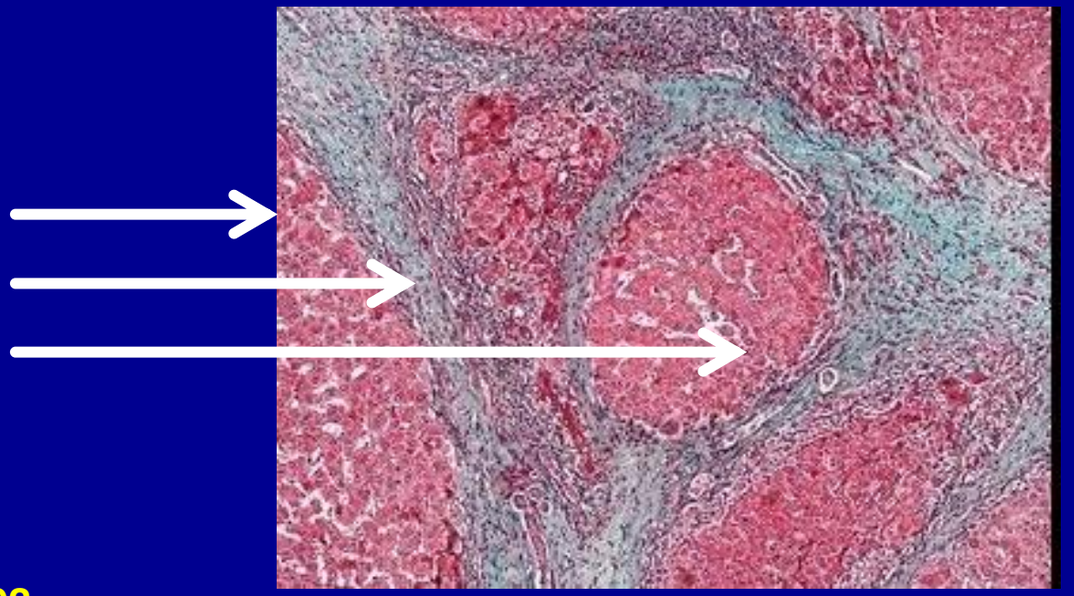
Único método que diferencia esteatosis simple de MASH

Estadificar fibrosis

Invasiva

1/50.000

1.5-2.5 cm/11 triadas portales



Patel V, Clin Liv dis 2016;20:277-92
EASL/EASD/EASO. Diabetología 2016;59:1121-40
Kleiner DE, Sem Liv Sis 2012;32:3-13

Métodos no invasivos para fibrosis

Abordaje Físico

Rigidez hepática

Elastografía transitoria vibración
Ultrasonido: no fibrosis/inflamación
Resonancia magnética

Abordaje Biológico

Biomarcadores

NAFLD fibrosis“score”
APRI
FIB 4

Castera L, Gastroenterology 2019;156:1264-81

NAFLD Fibrosis score
Específico para NAFLD

Edad, IMC, glicemia, Aminotransferasas, plaquetas, albumina

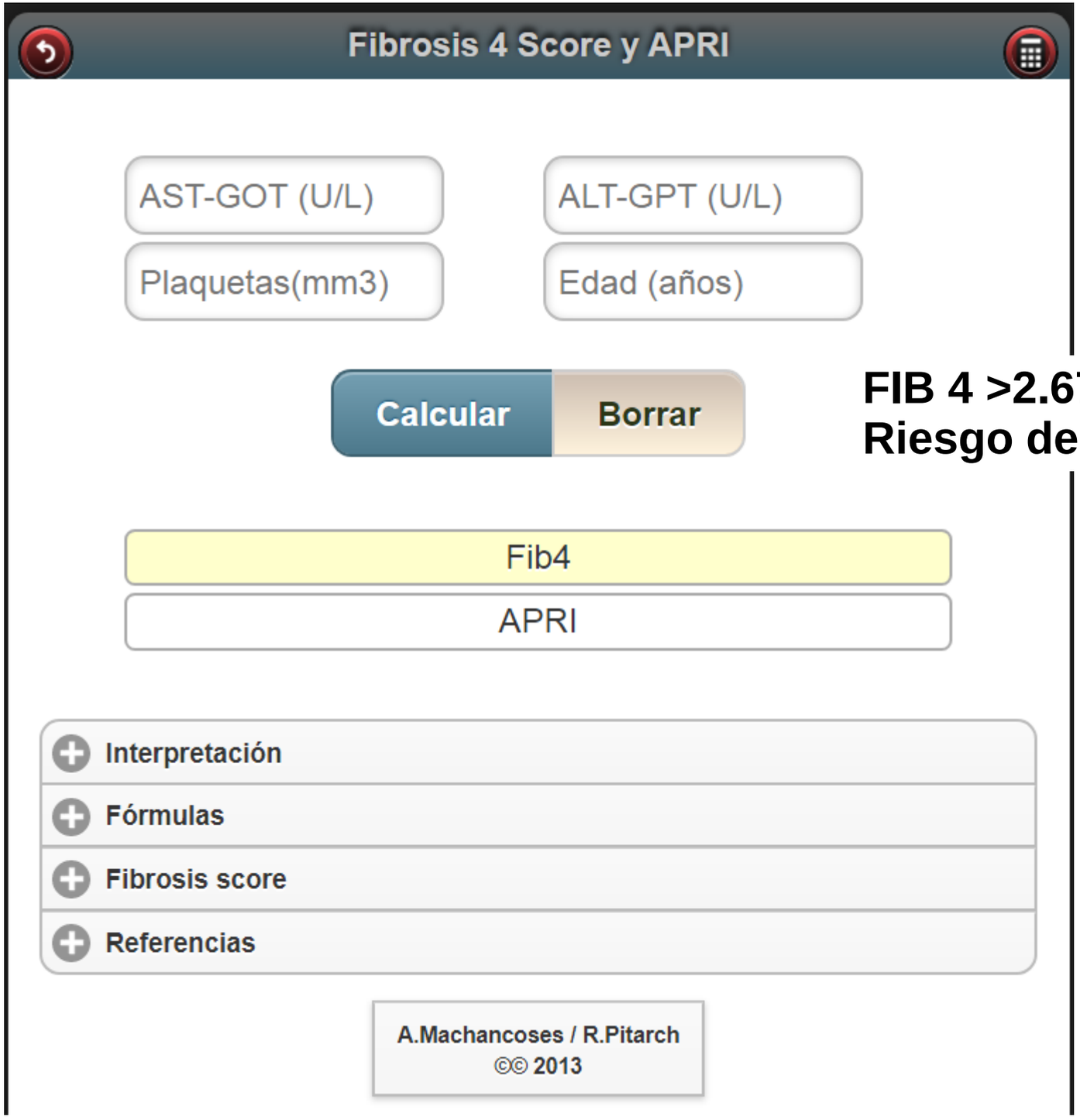
NAFLD fibrosis score
Online calculator

Angulo P, Hui JM, Marchesini G et al. **The NAFLD fibrosis score**
A noninvasive system that identifies liver fibrosis in patients with NAFLD
Hepatology 2007;45(4):846-854 doi:10.1002/hep.21496

< -1.455: predictor of absence of significant fibrosis (F0-F2 fibrosis)
≤ -1.455 to ≤ 0.675: indeterminate score
> 0.675: predictor of presence of significant fibrosis (F3-F4 fibrosis)

Age (years)
BMI (kg/m^2)
IGF/diabetes ☐
AST
ALT
Platelets ($x10^9/l$)
Albumin (g/l)
calculate score

BMI: body mass index
IGF: impaired fasting glucose



FIB 4 >2.67
Riesgo de cáncer

Risk of Hepatocellular Cancer in Patients With Non-Alcoholic Fatty Liver Disease

Fasiha Kanwal,[1,2,3] Jennifer R. Kramer,[2,3] Srikar Mapakshi,[2,3] Yamini Natarajan,[1] Maneerat Chayanupatkul,[1] Peter A. Richardson,[2,3] Liang Li,[4] Roxanne Desiderio,[2,3] Aaron P. Thrift,[1,5,6] Steven M. Asch,[7,8] Jinna Chu,[2] and Hashem B. El-Serag[1,2,3]

Group	Subjects	HCC cases	Total PYs of follow-up	Tasa de incidencia (per 1000 PYs)
Cirrhosis diagnosis and high FIB-4 score	2,871	252	18,598	13.55 (11.93–15.33)
Cirrhosis without high FIB-4 score	1,364	45	9323	4.82 (3.52–6.46)
High FIB-4 score without cirrhosis diagnosis	34,392	101	259,942	0.39 (0.31–0.47)
Neither cirrhosis diagnosis nor high FIB-4 score	258,074	92	2,094,427	0.04 (0.04–0.05)

FIB 4 >2.67

Gastroenterology 2018;155:1828–1837

Gastroenterology 2020;158:1822–1830

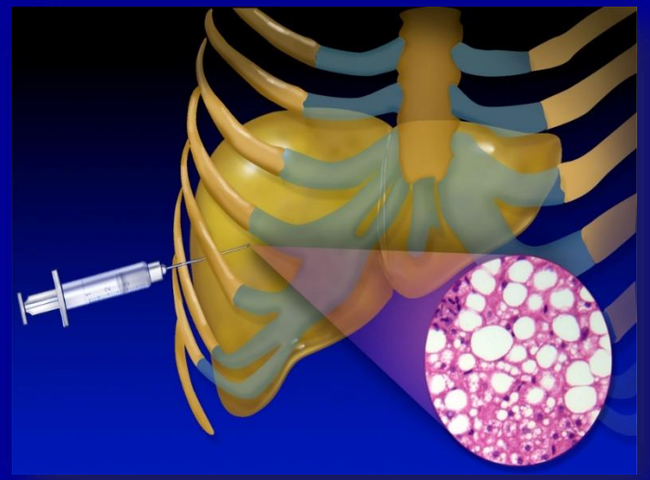
CLINICAL PRACTICE UPDATE

AGA Clinical Practice Update on Screening and Surveillance for Hepatocellular Carcinoma in Patients With Nonalcoholic Fatty Liver Disease: Expert Review

Rohit Loomba,[1,2] Joseph K. Lim,[3] Heather Patton,[4,5] and Hashem B. El-Serag[6]

Cirrosis
FIB 4 alto

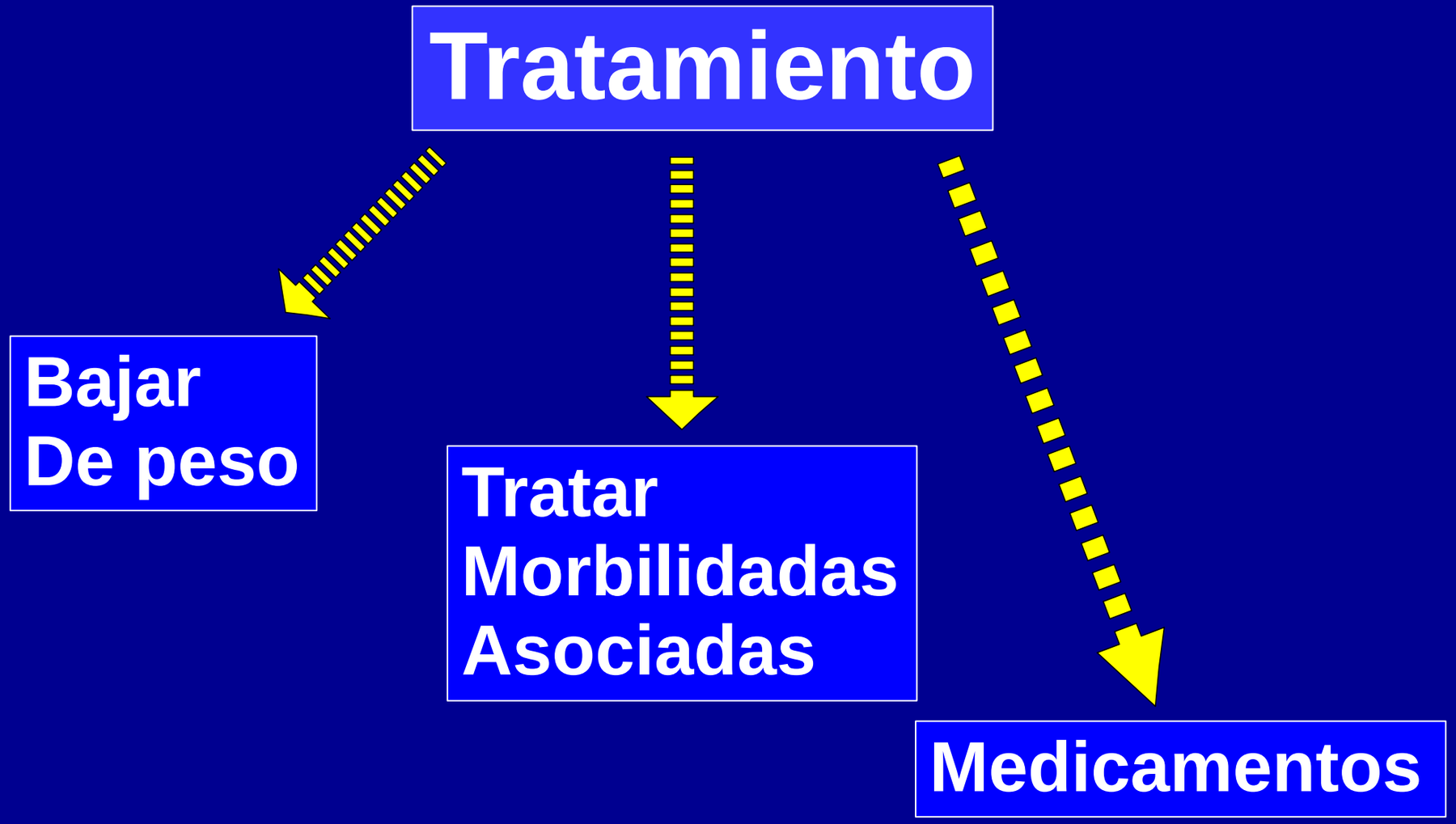
NAFLD



Estigmas enfermedad hepática crónica
“NAFLD Fibrosis Score” elevado
Ferritina >1.5 veces (*NASH/Fibrosis avanzada*)
Esplenomegalia
ALT elevada > 6 meses
> 45 años, diabetes
Cirugía bariátrica

Patel V, Clin Liv Dis 2016;20:277-92
EASL/EASD/EASO. Diabetología 2016;59:1121-40
Shet SG. Up To Date 2021

NAFLD/NASH


Tratamiento
Bajar
De peso
Tratar
Morbilidadas
Asociadas
Medicamentos

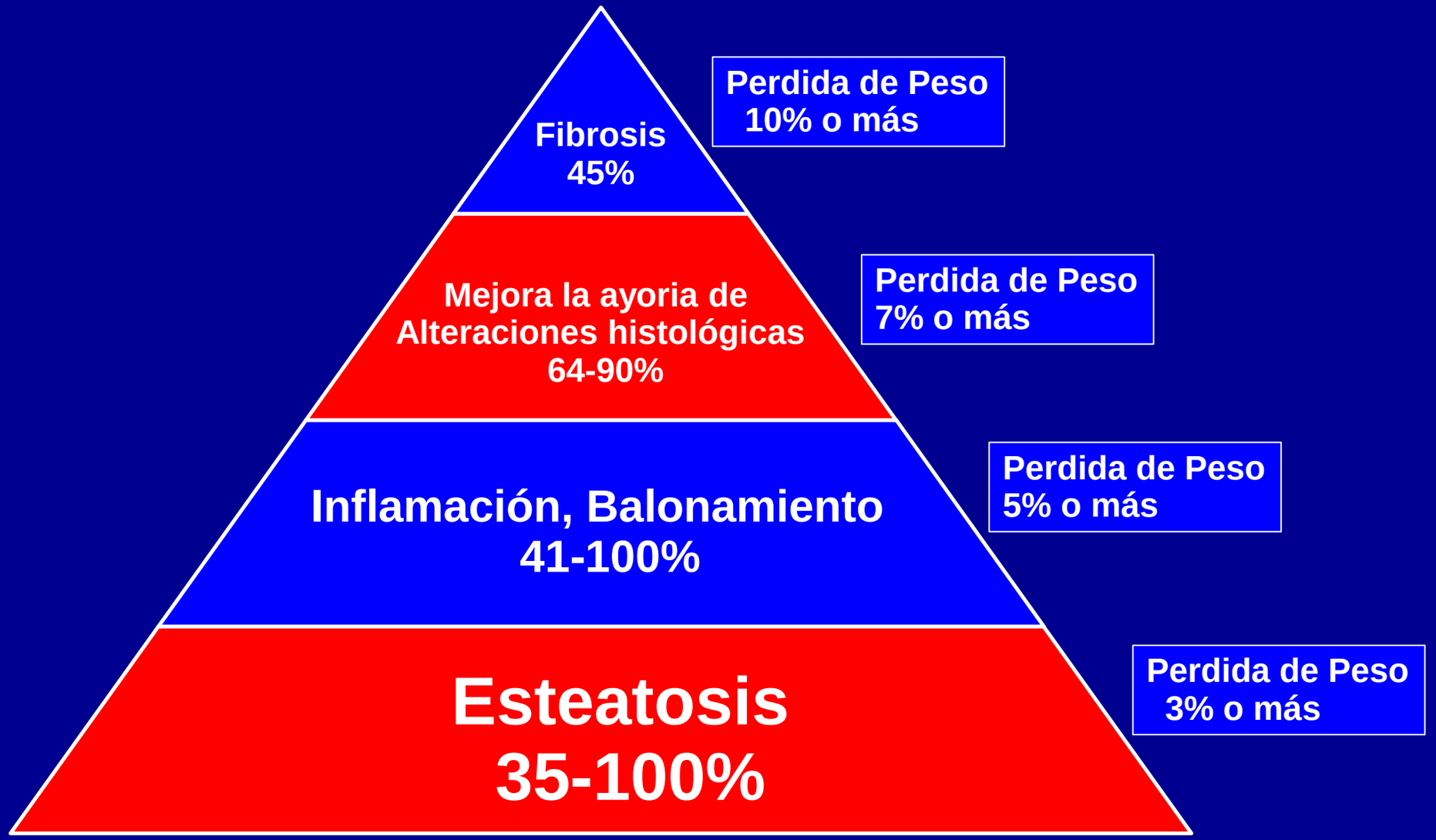
Tratamiento

Piedra angular

Bajar de peso
No alcohol

Chalasani N, et al. Am J Gastroenterol 2012;107:811–826
Promrat K, Hepatology 2010;51:121-9

NAFLD/NASH pérdida de peso

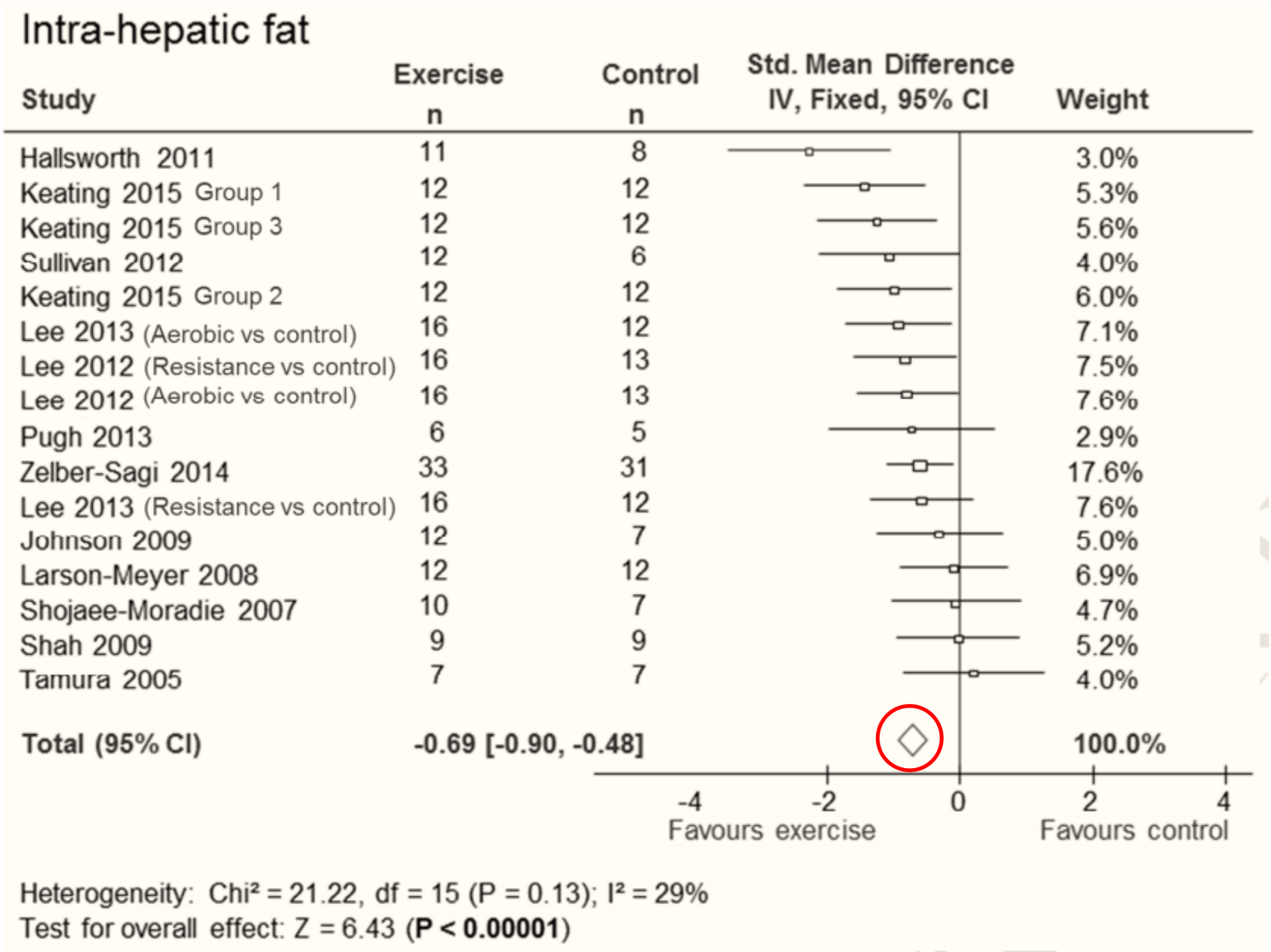


Hannah Jr WN, Clin Liv dis 2016;20:339-50
AASLD 2018, AGA 2020

NAFLD-NASH

Ejercicio

Ejercicio y NASH, Meta-análisis



Orci LA, Gastroenterology 2016, Online May 25

Cafè cafeinado

NAFLD <<<< NASH
NASH <<< Fibrosis

Birerdinc A, Aliment Pharmacol Ther 2012;35:76-82
Molloy JW, Hepatology 2012;55:429-36

MAFLD

Control de comorbilidades

Solo el internista Lo sabe hacer bien

NAFLD, Tratamiento

Manejo de co-morblidades metabólicas

Diabetes Mellitus tipo 2
Hipertensión arterial
Dislipidemia
Apnea del sueño
Obesidad (Bariátrica)

Con la mejor evidencia

Chalasani N, et al. Am J Gastroenterol 2012;107:811–826
Promrat K, Hepatology 2010;51:121-9
Chalasani N, Hepatology 2018;67:328-57

MAFLD

Tratamiento Farmacológico

2018

Tratamiento Farmacológico Para NAFLD/ NASH/NASF

No hay medicamentos aprobados por FDA

Medicamentos

Exigencias de la FDA

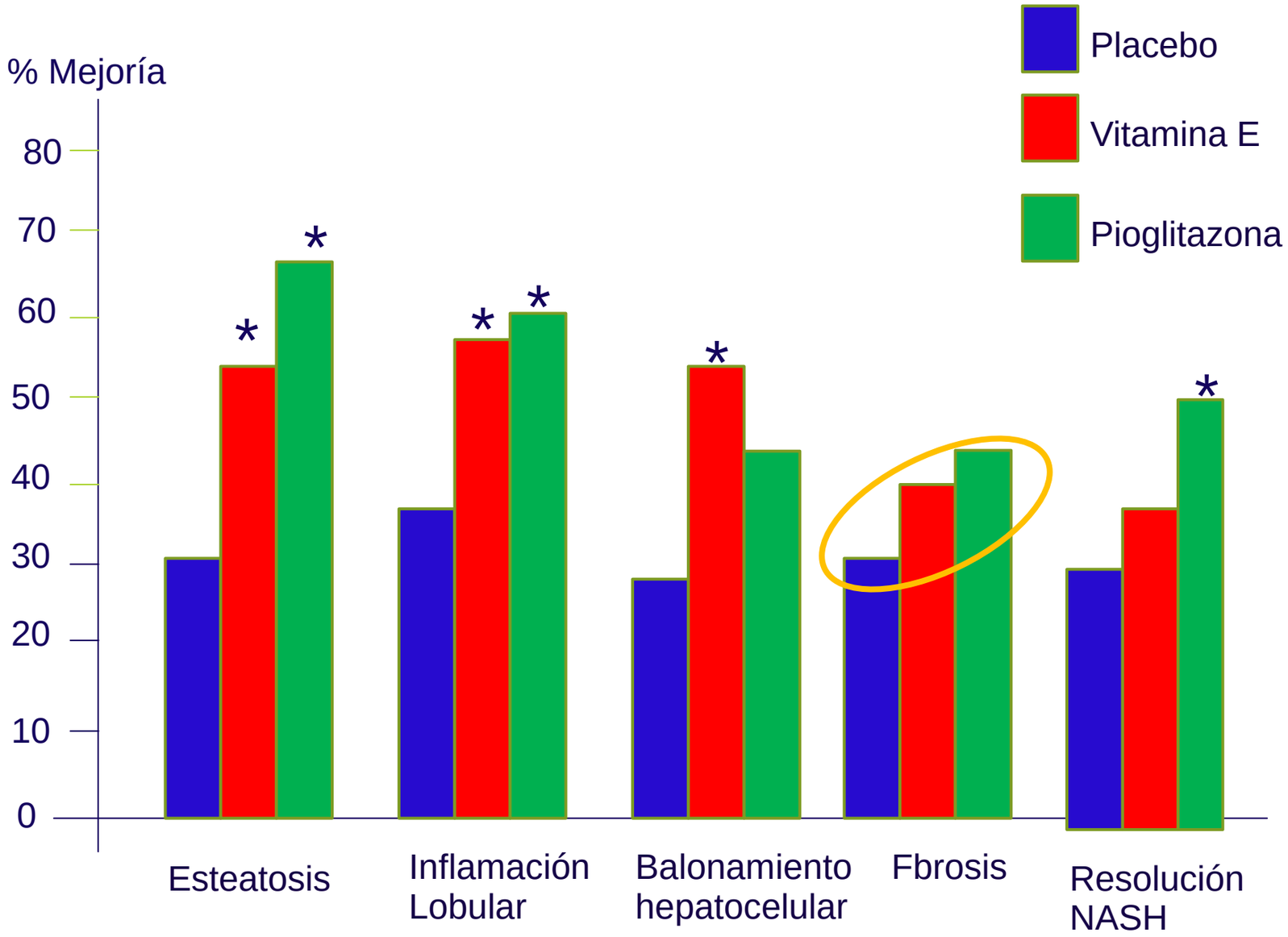
EMA ambos

Mejorar la histología

Resolución de NASH
Sin empeorar fibrosis

Mejoría fibrosis ≥ estado
Sin emporar NASH

Pioglitazona vs Vitamina E vs Placebo



Sanyal AJ, NEJM 2010;362:1675-85

Tratamiento Farmacológico

Eficaces.

Tiazolidinedionas: pioglitazona 30 mg/dìa

>peso, osteopenia, Ca vejiga, ICC

Vitamina E: 150 UI/día.

>>Mortalidad 400UI/día

39 muertes/10.000 personas (IC95%3-74)

Cáncer próstata >50 años (RR 1.6),

>>>Riesgo de ECV hemorràgicos 0.8/1000

>RR 22%

No en diabèticos

Sanyal AJ, NEJM 2010;362:1675-82
Miller ER, Ann Intern Med 2005;142:37-46
Klein EA, JAMA 2011;306:1549-56
Schurks M, BMJ 2010;341;c5702

Tratamiento Farmacológico

NASH (Esteato-hepatitis)
Comprobada por biopsia
Viatamina E, Pioglotazona

AASLD, Guías 2018
EASL Guías 2016
España Guías 2018

Tratamiento Farmacológico

Eficacia No Comprobada

Ácidos grasos poli-insaturados
Metformina
Fibratos
Estatinas
Antagonistas Angiotensina
Pentoxifilina
UDCA

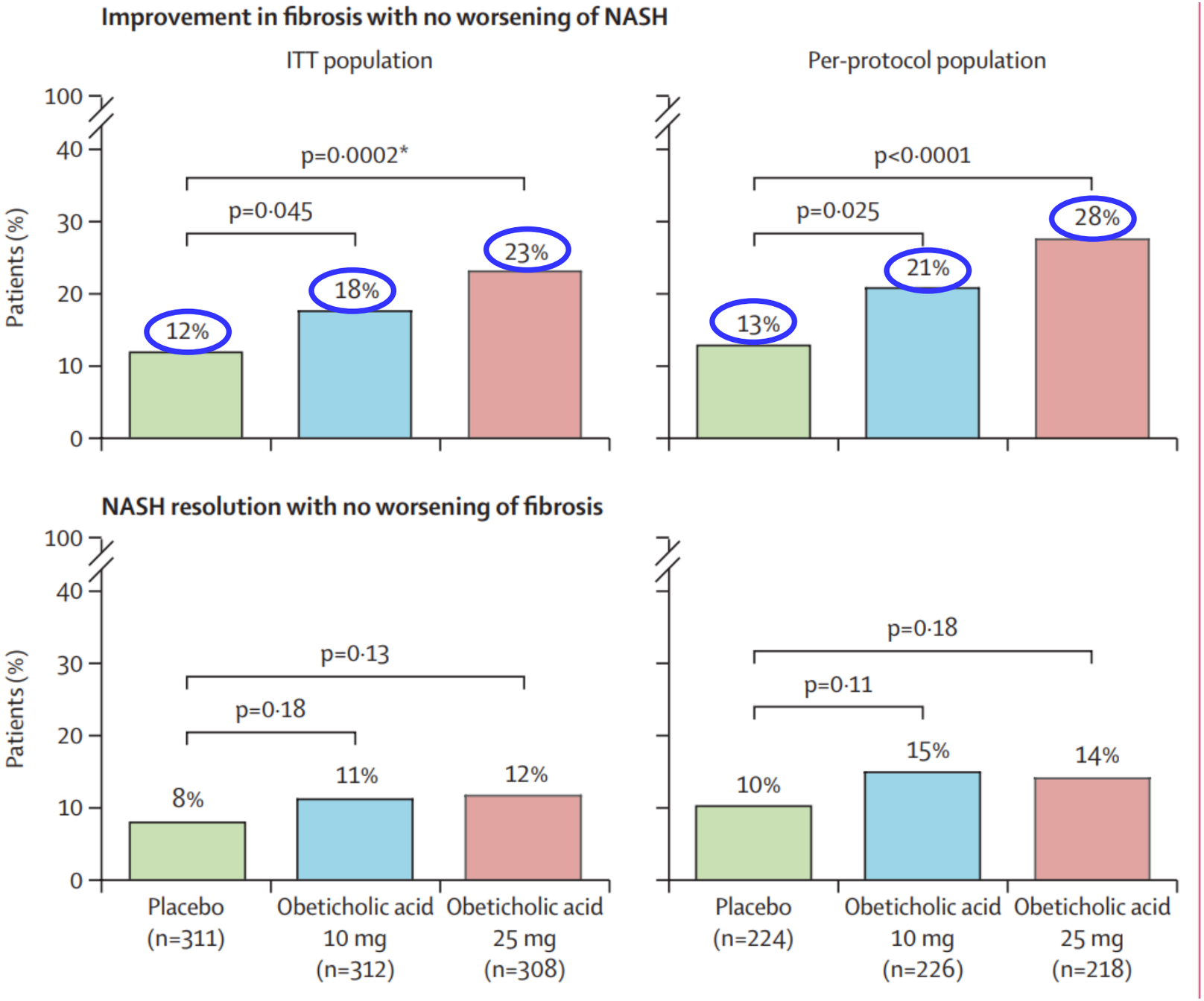
AASLD 2017, EASL 2016
Townsend SA Aliment Pharmacol Ther 2017; Early Rel August 10

Medicamentos prometedores

Obeticholic acid for the treatment of non-alcoholic steatohepatitis: interim analysis from a multicentre, randomised, placebo-controlled phase 3 trial

Zobair M Younossi, Vlad Ratziu*, Rohit Loomba, Mary Rinella, Quentin M Anstee, Zachary Goodman, Pierre Bedossa, Andreas Geier, Susanne Beckebaum, Philip N Newsome, David Sheridan, Muhammad Y Sheikh, James Trotter, Whitfield Knapple, Eric Lawitz, Manal F Abdelmalek, Kris V Kowdley, Aldo J Montano-Loza, Jerome Boursier, Philippe Mathurin, Elisabetta Bugianesi, Giuseppe Mazzella, Antonio Olveira, Helena Cortez-Pinto, Isabel Graupera, David Orr, Lise Lotte Gluud, Jean-Francois Dufour, David Shapiro, Jason Campagna, Luna Zaru, Leigh MacConell, Reshma Shringarpure, Stephen Harrison†, Arun J Sanyal†, on behalf of the REGENERATE Study Investigators*

Younossi ZM, Lancet 2019;394:2184-2196.



Younossi ZM, Lancet ;394:2184-2196.

NAFLD-NASH-NASF. Ensayos Fase 2

Drug	Mechanism	Histology					
		Steatosis	Ballooning	Inflammation	NAS	NASH resolution	Fibrosis
Pioglitazone (142)	PPAR-γ agonist	⇓	⇓	⇓	⇓	+	–
Liraglutide (158)	GLP-1 agonist	⇓	⇓	–	–	+	–
Vitamin E (142)	Antioxidant	⇓	⇓	⇓	⇓	–	–
Pentoxifylline (159,160)	TNF-α inhibitor	⇓	⇓/–	⇓/–	⇓/–	–	⇓/–

⇓Indicates a statistically significant decrease compared with placebo.

–Indicates no statistically significant difference compared with placebo.

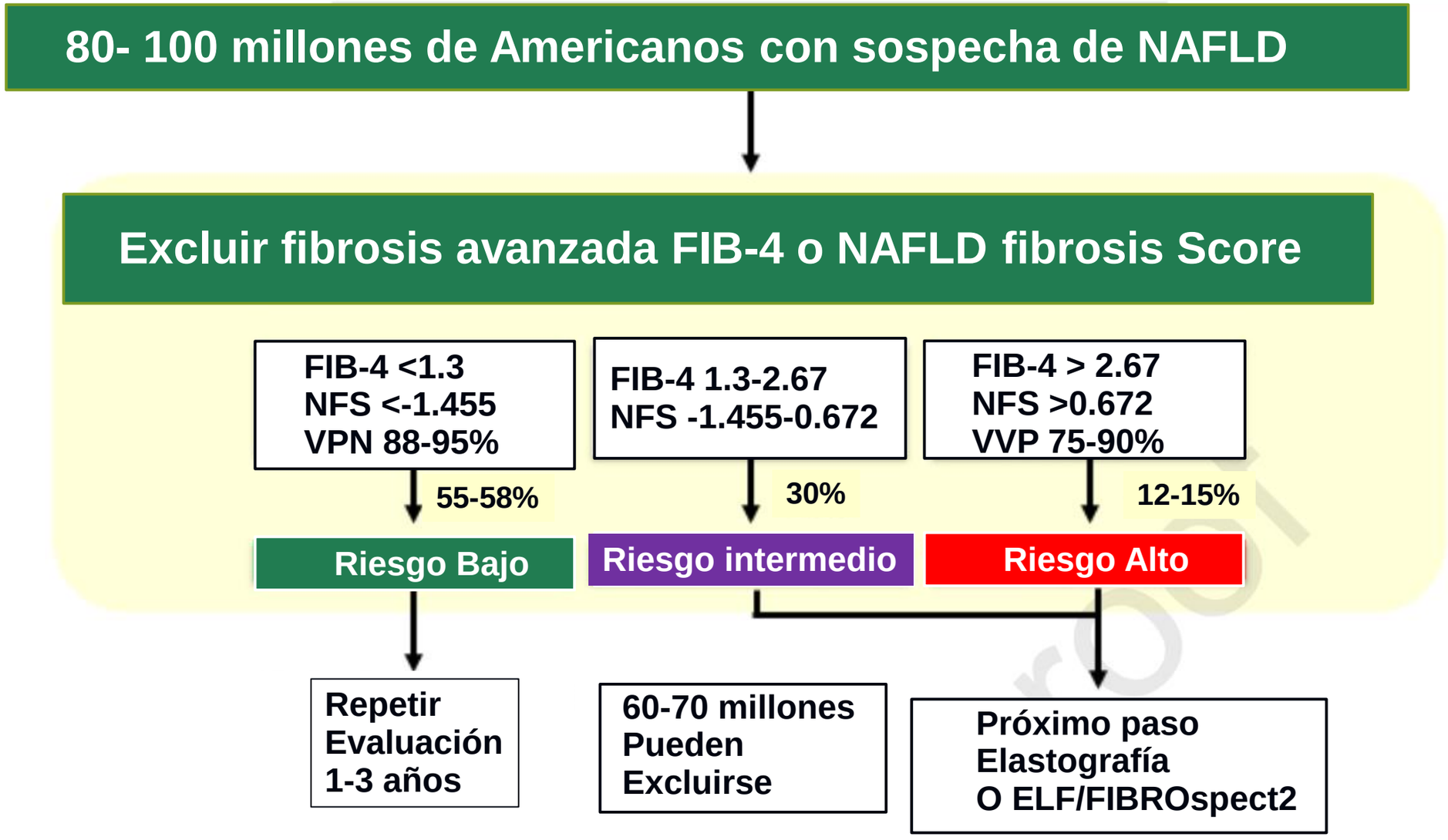
+Sign for NASH resolution indicates a statistically significant improvement compared with placebo, although NASH resolution has been variably defined in the trials mentioned earlier.

NASH, nonalcoholic steatohepatitis.

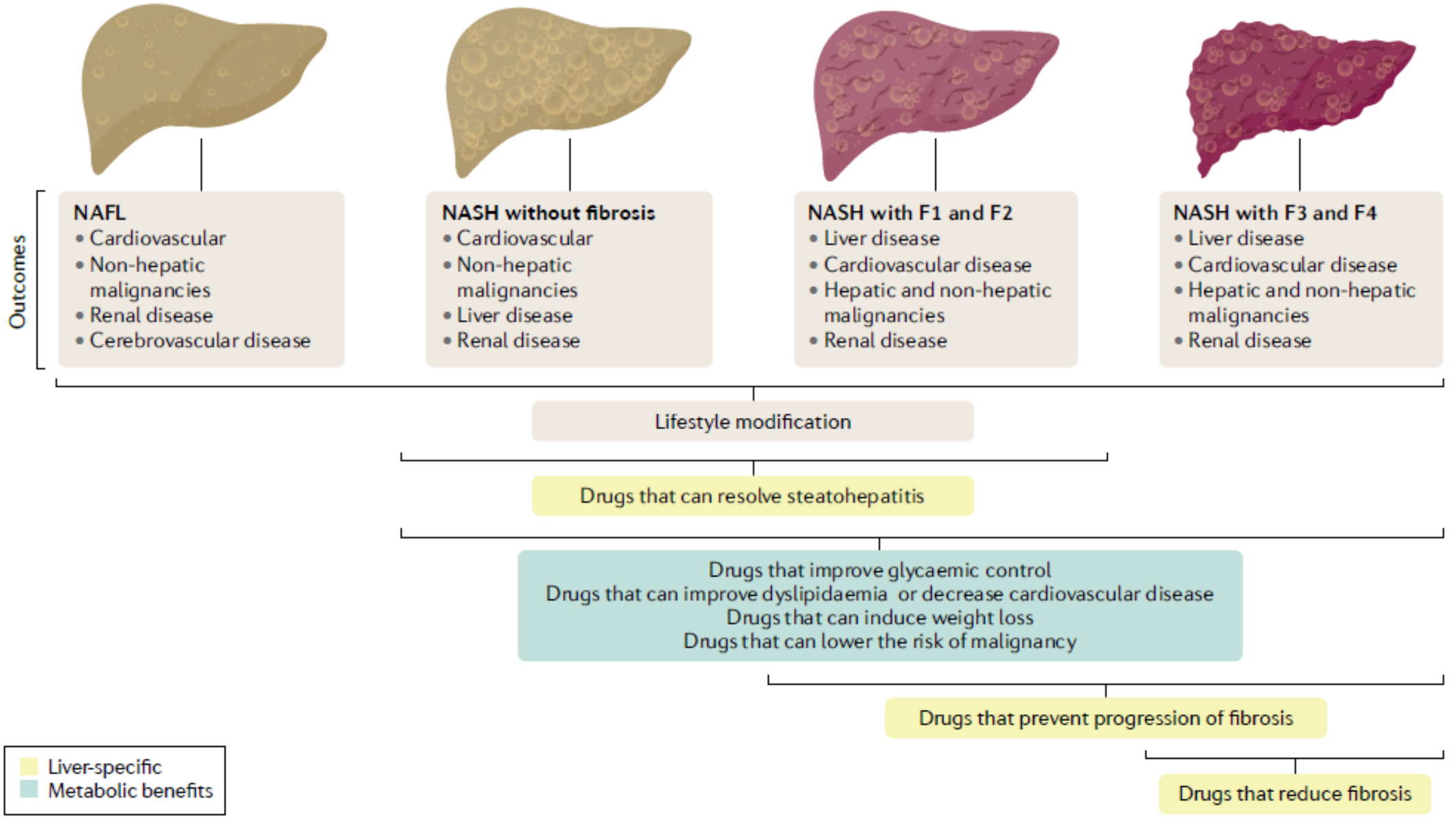
Cheung A, Am J Gastroenterol 2019;114:579-590


NAFLD

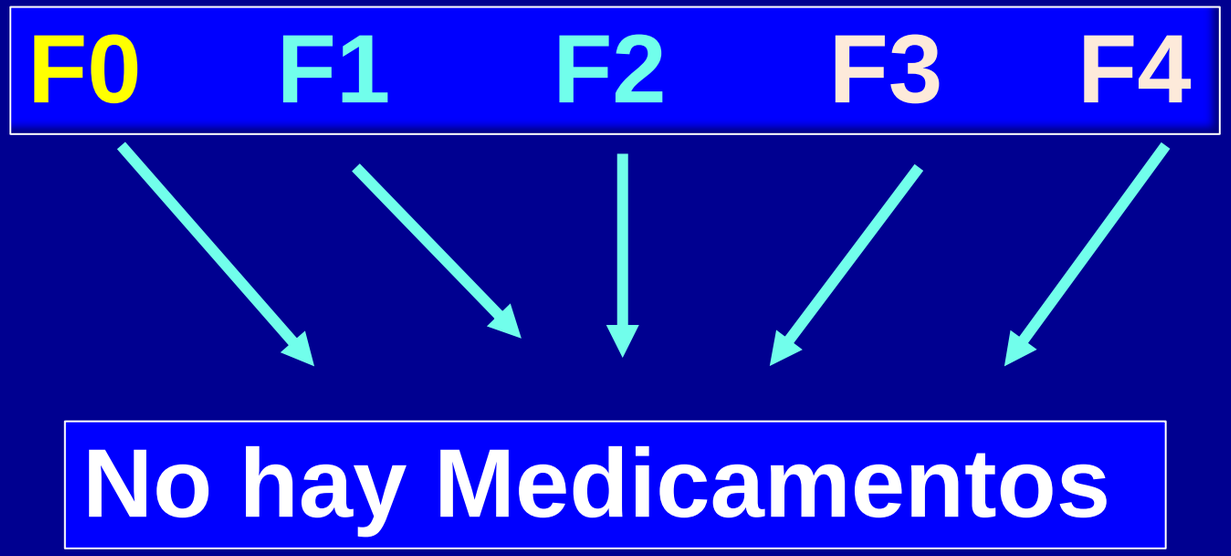
Optimización del manejo de la población con NAFLD



Rowe IA, Clin Gastroenterol Hepatol 2021, Mayo 30



Vuppalanchi R, Nat Rev Gastroenterol Hepatol. 2021;18:373-392



Bajar de peso-Bajar de peso-Bajar de Peso

Dieta-Dieta-Dieta-dieta-Dieta-Dieta-Dieta-Dieta
Endoterapia-bariátricas- etc, etc, etc, etc, etc etc

NAFLD/ MAFLD

Debe manejarlo

Quien tenga la Competencia

NAFLD/MAFLD

Competencia ?

Dieta
Ejercicio
Comorbilidades
Café

Internista

NAFLD

NASH

NASF

Cirrosis

Comprobado
Con Biopsias
Vitamina E
Pioglitazona

No hay
Medicamentos
Obeticólico?

Gastroenterólogo
Hepatólogo

Medicina General, Medicina Familiar, Endocrinología, Medicina Interna

Diabetes

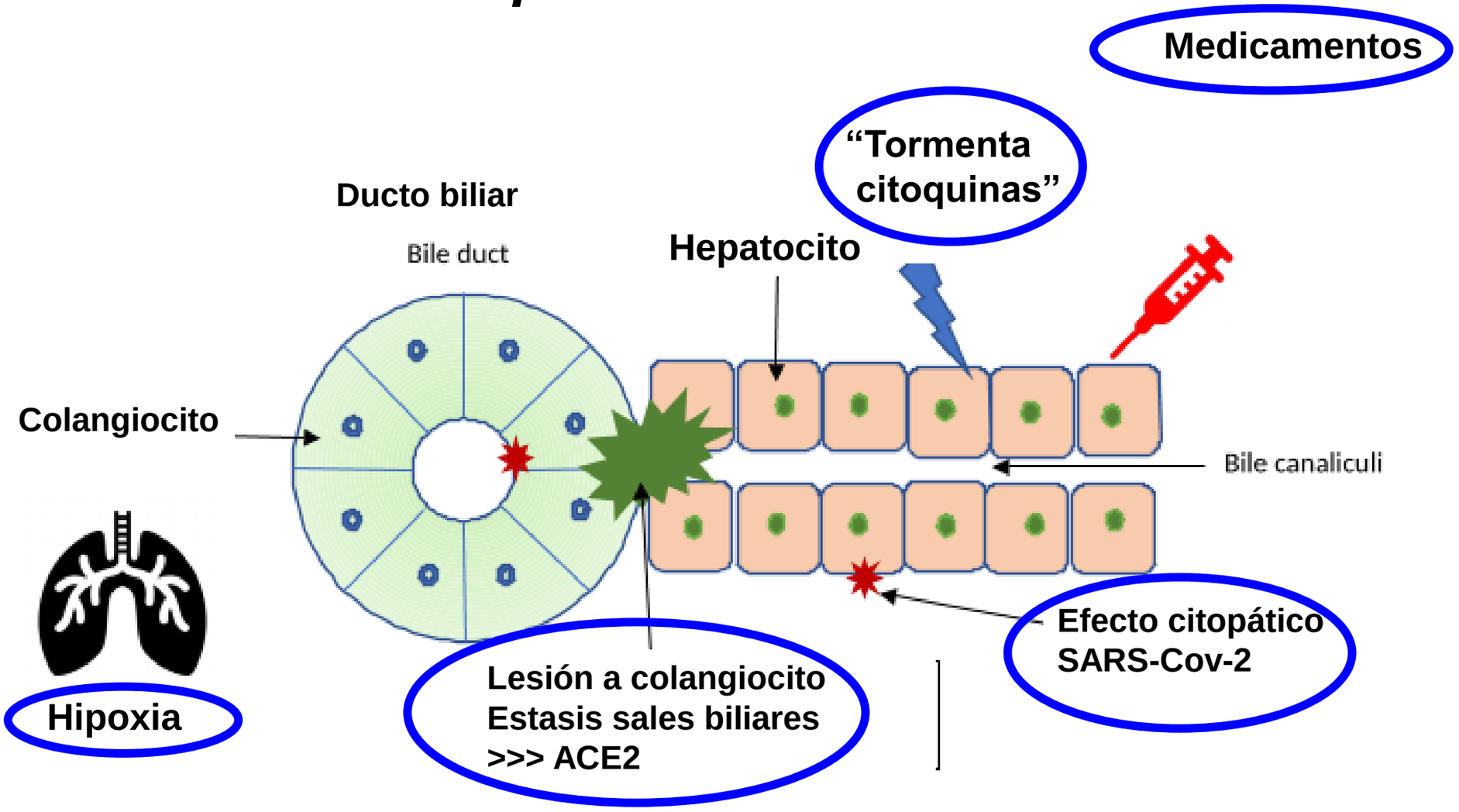
Obesidad

Síndrome Metabólico

Ecografia hepatobiliar
Perfil hepàtico
ALT, AST, Bilirrubinas
Fosftasa alcalina
Albumina, TP
Proteínas totales
Cuadro hemático (FIB4 plaquetas)

COVID 19

Daño hepático multifactorial



Kumar P, *J Clin Exper Hepatol 2020, April 28*

Clinical Gastroenterology and Hepatology 2020;18:1561–1566

PANCREAS, BILIARY TRACT, AND LIVER

Clinical Features of COVID-19-Related Liver Functional Abnormality

Zhenyu Fan,[*,a] Liping Chen,[*,a] Jun Li,[*] Xin Cheng,[*] Jingmao Yang,[*] Cheng Tian,[*] Yajun Zhang,[*] Shaoping Huang,[*] Zhanju Liu,[‡] and Jilin Cheng[*]

More than one third of patients admitted to the hospital with SARS-CoV-2 infection have abnormal liver function, and this is associated with longer hospital stay. A significantly higher proportion of patients with abnormal liver function had received lopinavir/ritonavir after admission; these drugs should be given with caution.

22 años, Dolor abdominal, sospecha de Corononavirus
Ranitidina, Naproxeno Hidroxicloroquina, Azitromicina y oseltamivir, Claritromicina

***D* rug**
***R* eaction**
***E* osinofiphilia**
***S* ystemic**
***S* ymptoms**

Reacción idiosincrática severa a medicamentos: rash fiebre, Compromiso Multistémico, Eosinofilia

Medicamentos Para COVID-19

Resumen de la Evidencia Publicada

NAFLD COVID 19

Condiciones asociadas a alta mortalidad

Banerjee A, et al. Lancet 2020 Junio 6

JAMA | Original Investigation

Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area

Safiya Richardson, MD, MPH; Jamie S. Hirsch, MD, MA, MSB; Mangala Narasimhan, DO; James M. Crawford, MD, PhD; Thomas McGinn, MD, MPH; Karina W. Davidson, PhD, MASc; and the Northwell COVID-19 Research Consortium

5700 pacientes

Hipertensión 57%

Obesidad 42%

Diabetes 34%

Ventilación mecánica
Mortalidad: 88%

JAMA. 2020;323:2052-9

Diabetes & Metabolic Syndrome: Clinical Research & Reviews 15 (2021) 813–822

Contents lists available at ScienceDirect

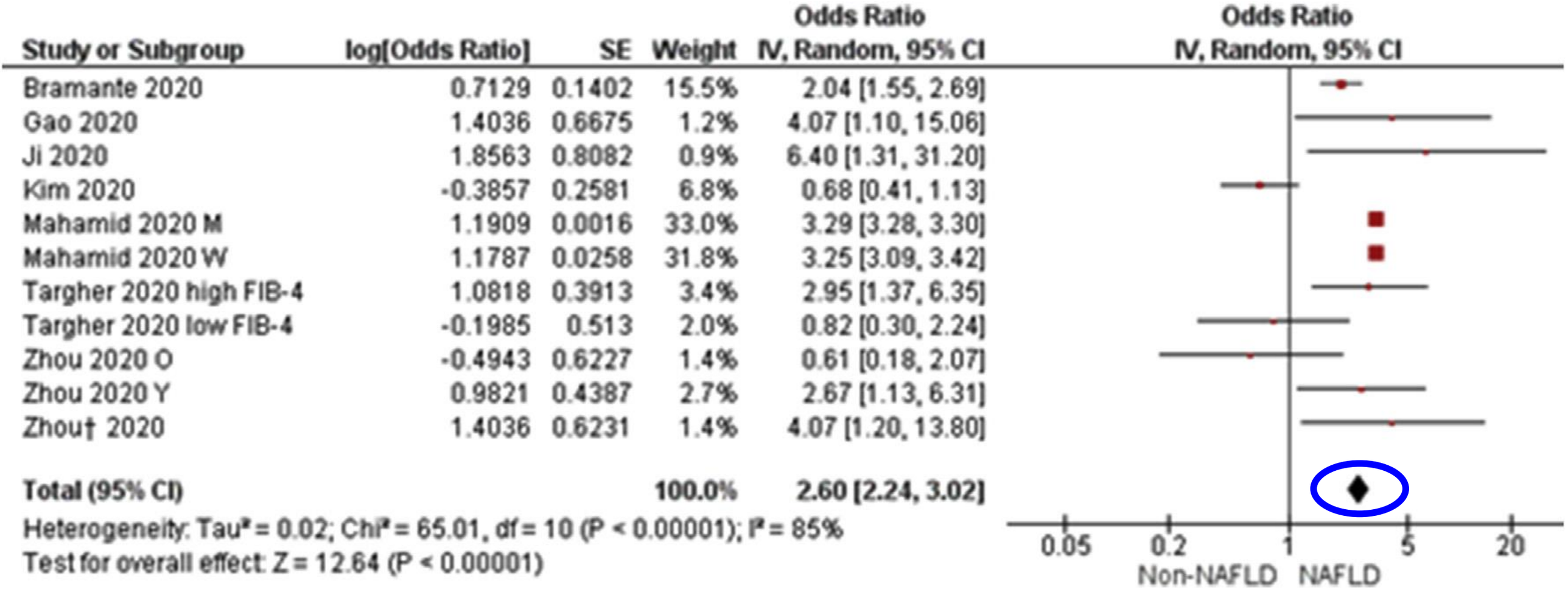
Diabetes & Metabolic Syndrome: Clinical Research & Reviews

journal homepage: www.elsevier.com/locate/dsx

Non-alcoholic fatty liver disease and clinical outcomes in patients with COVID-19: A comprehensive systematic review and meta-analysis

Ambrish Singh [a, **], Salman Hussain [b], Benny Antony [a, *]

Severidad de COVID-19



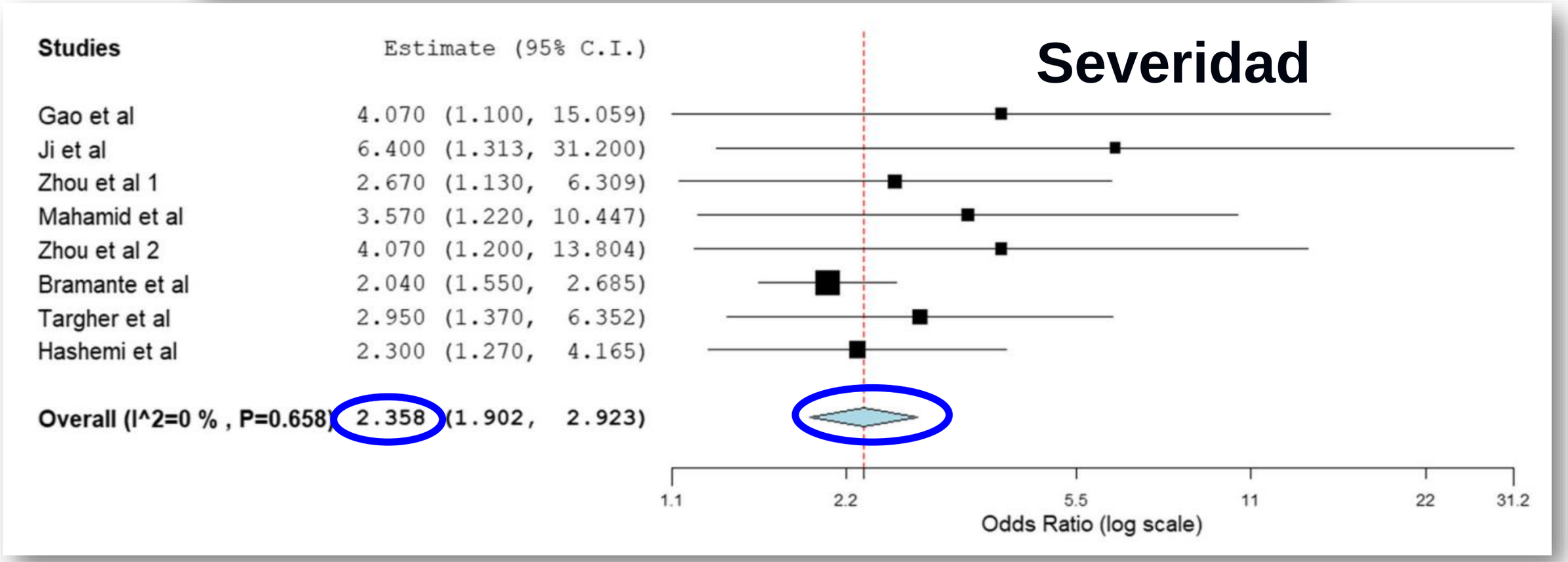
Singh A, Diabetes Metab Syndr. 2021;15:813-822.

SN Comprehensive Clinical Medicine (2020) 2:2726–2729
https://doi.org/10.1007/s42399-020-00631-3

COVID-19

NAFLD and COVID-19: a Pooled Analysis

Sonali Sachdeva [1] · Harshwardhan Khandait [2] · Jonathan Kopel [3] · Mark M. Aloysius [4] · Rupak Desai [5] · Hemant Goyal [4]



frontiers in Medicine

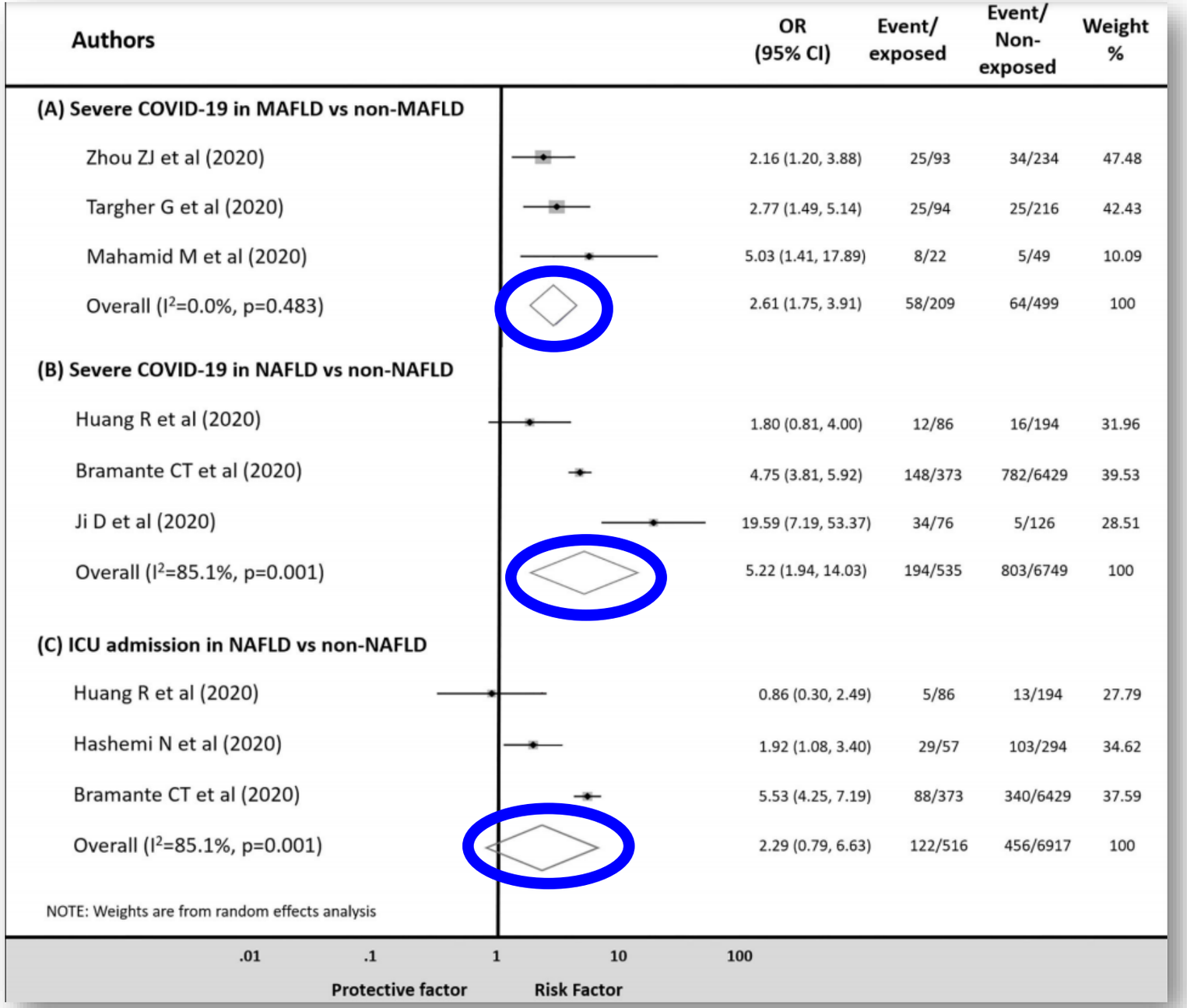
SYSTEMATIC REVIEW
published: 12 March 2021
doi: 10.3389/fmed.2021.626425

Check for updates

Metabolic Associated Fatty Liver Disease Is Associated With an Increased Risk of Severe COVID-19: A Systematic Review With Meta-Analysis

Péter Jenő Hegyi[1†], Szilárd Váncsa[1,2†], Klementina Ocskay[1,2], Fanni Dembrovszky[1,2], Szabolcs Kiss[1,2,3], Nelli Farkas[1,4], Bálint Erőss[1], Zsolt Szakács[1,2], Péter Hegyi[1,2] and Gabriella Pár[1,5]*

Hegyi PJ,.Front Med (Lausanne). 2021;8:626425.



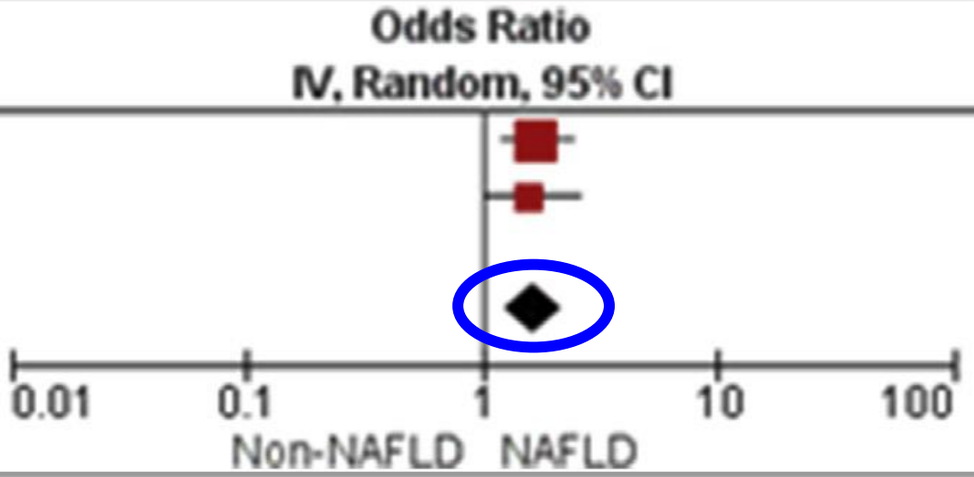
Hegyi PJ,.Front Med (Lausanne). 2021;8:626425.

Admisión a UCI

Study or Subgroup	log[Odds Ratio]	SE	Weight	Odds Ratio IV, Random, 95% CI
Bramante 2020	0.5306	0.1777	64.6%	1.70 [1.20, 2.41]
Chen 2020	0.47	0.2398	35.4%	1.60 [1.00, 2.56]
Total (95% CI)			**100.0%**	**1.66 [1.26, 2.20]**

Heterogeneity: Tau² = 0.00; Chi² = 0.04, df = 1 (P = 0.84); I² = 0%

Test for overall effect: Z = 3.57 (P = 0.0004)



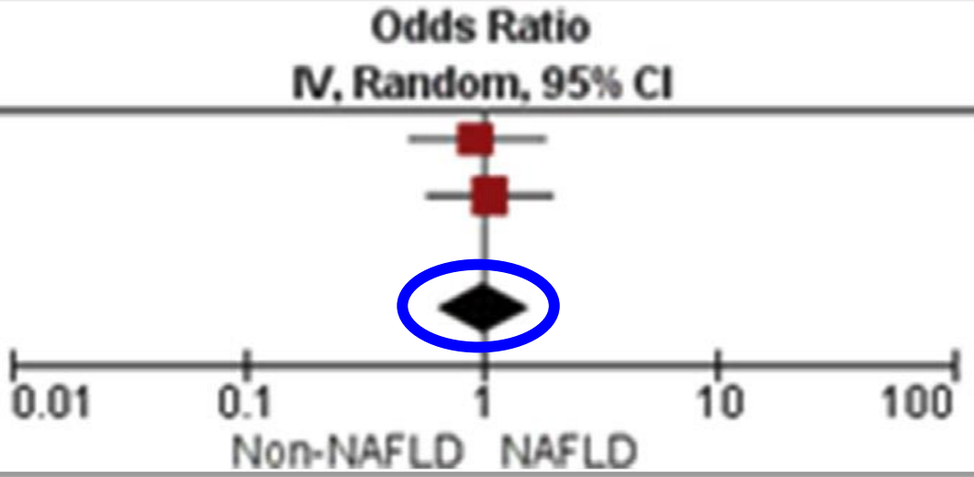
Singh A, Diabetes Metab Syndr. 2021;15:813-822.

Mortalidad

Study or Subgroup	log[Odds Ratio]	SE	Weight	Odds Ratio IV, Random, 95% CI
Chen 2020	-0.0619	0.3324	46.3%	0.94 [0.49, 1.80]
Kim 2020	0.077	0.3085	53.7%	1.08 [0.59, 1.98]
Total (95% CI)			**100.0%**	**1.01 [0.65, 1.58]**

Heterogeneity: Tau² = 0.00; Chi² = 0.09, df = 1 (P = 0.76); I² = 0%

Test for overall effect: Z = 0.06 (P = 0.96)



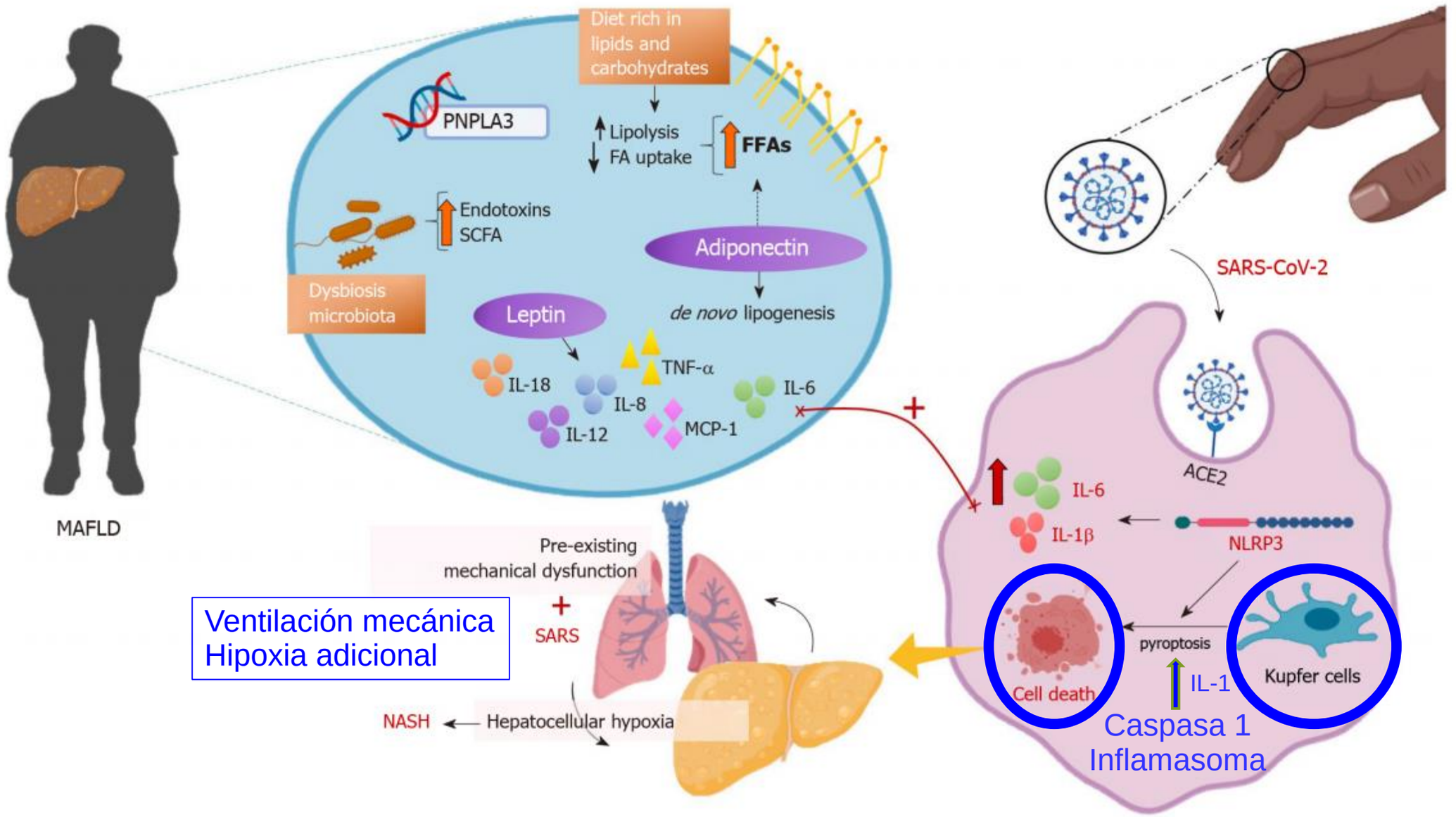
Singh A, Diabetes Metab Syndr. 2021;15:813-822.

COVID-19
Obesidad,MAFLD

Activación Kupffer
Inflamasomas

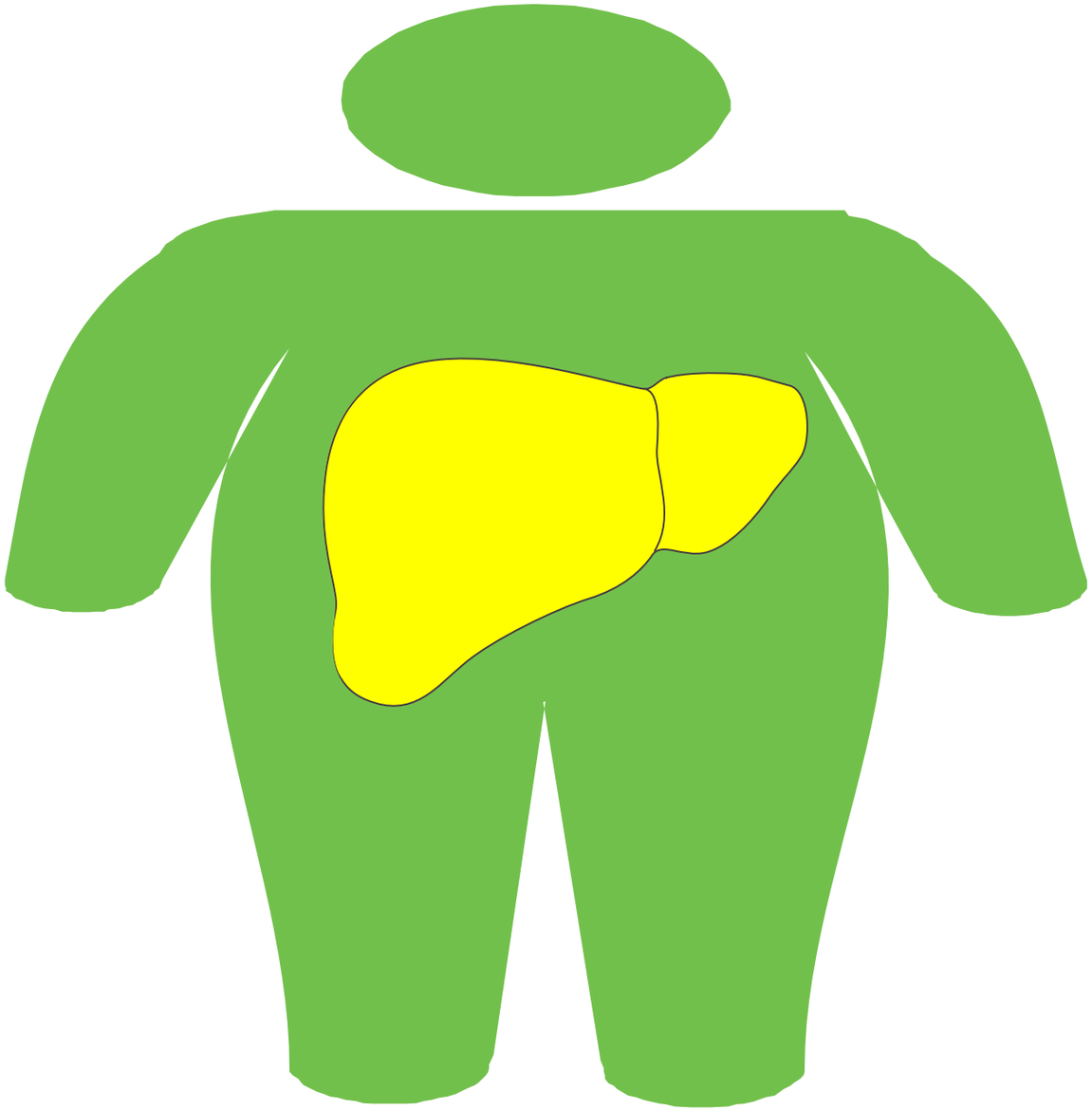
Tormenta
Citoquinas

Kassir R, Obe Rev 2020;21:e13034
Iannelli A, et al. Obes Surg 2020;Mayo25



Vasques-Monteiro IML, et al. World J Gastroenterol 2021; 27: 1738-1750

NAFLD grupo prioritario
Para vacunación



Mensajes para la casa

NAFLD/MAFLD subdiagnosticada
Alta mortalidad cardiovascular
Principal causa de cirrosis
COVID-19-NAFLD Más severo
Bajar de peso, comorbilidades
Médico General, Internista y endocrinólogo
Cirrosis: Gastroenterólogo, hepatólogo

IMC > 30
Vive 9 años menos

IMC > 40
Vive 13 años menos

Withlock G, Lancet 2006;368:666-78
Brolin RE, JAMA 2003;289:187-93

NAFLD/NASH

Tratamiento Farmacológico

Todavía no existe una “pastilla milagrosa”

Internista es Fundamental

Muchas gracias!