

An all too common liver case

Niall Breslin, Consultant Gastroenterologist and Hepatologist

TECHNOLOGY OF THE FUTURE SHOULD HAVE A CLEAR PURPOSE

Sinead Ryan

I'M NOT sure of the exact moment that I discovered technology and me were never going to go along, but I never remember Facebook, Twitter or WeChat again for the rest of my life, it will be too soon.

I'm still getting to grips with the clock on my oven, which will have to do without daylight saving time for the next six months. It's right half the year, and that I do, I will wear a wristwatch and like a pencil and notebook.

I am, obviously, a huge fan of technology when other people complain it is not for progress across our lives, although I admit to being more than a little creeped out when I stumbled across Reddit. Kinda freak

●● **I really can't imagine what 2122 will look like**

up on YouTube, and don't blame me if you can't sleep for a week. It is a scary littlest android child aimed at training devices.

Meanwhile, it has only just landed with me that those ads warning us have to spot the weird 'smart' glasses that can take a picture of you without your knowledge aren't a good.

They're paid for by the company that makes the View Glasses in what appears to be an effort to normalise stalking.

Anyhow, it got me thinking about what's yet to come – and although we can't predict the future of technology, that has never stopped us trying it. An article on the 100 Expositions Universelle held in Paris revealed what we could expect by the year 2000

and included roads to airport-style travellers, sky cars with rotor blades and the unthinkable suggestion that automobiles could even be cheaper than horses. Picnic baskets would deliver post, meat, and laundry – food first perhaps. Precious!

The *Boston Globe* had in 1900 pounds explore a century hence and predicted: "Ships a thousand feet long will carry people and product to Europe in four or five days." Given the delays at Dublin and Heathrow airports, it sounds like a pipedream.

They did, somewhat optimistically, hope for a "universal free education" and "attractive schoolhouses in which scholars will neither grow blind as a result of insufficient light, nor contract disease from bad drainage".

Fascinatingly, it said Deer Island, the immigration centre set up to aid those fleeing the Irish famine in the 1840s, would be by 2000 "a great receiving station for such immigrants and merchandise". Grand opera, it said, would be "disseminated" directly into people's homes with musicians "transmitting electric keys" to simultaneously play instruments around the world.

Curiously, all the women are still depicted in corseted dresses and large feathered hats. Quite why fashion wouldn't have changed again with science is anybody's guess, but the Victorians were conventionally stuffy.

Anyhow, the Census lady arrived at the vicarage to collect my handwritten 'opt' forms with its time capsule.

I can't imagine what 2122 will look like and didn't make any predictions about it, but I did speculate to my descendants for the state of the place today and express the hope that future technology would exist for the greater good, rather than just because it can.



Ireland among most obese nations in Europe, warns WHO

Eliah O'Regan

LEVELS of obesity in Ireland, which affects more than one in four adults, are now above the European average and the condition has reached epidemic proportions, a major World Health Organisation report has warned.

Obesity prevalence for men and women in this country has now climbed to 25.5pc compared to a European average of 23.3pc.

The difference is most striking for Irish men – 25.5pc of whom are obese compared to an 23.8pc on average across Europe.

Ireland ranks ninth in a table of 51 countries for obesity, it is in 11th place for people who are either overweight or obese. Among children aged five to nine, Ireland is in ninth place for overweight and obesity. For those aged 10 to 19, Ireland is in 20th place in the same table.

The report warns obesity has reached epidemic proportions across Europe and is still escalating. Obesity is linked to at least 13 types of cancer.

Overall, some six in 10 adults in Ireland are now overweight or obese, including 64.3pc of men and 55.2pc of women. The report, presented at this year's European Congress on Obesity in Maastricht, Netherlands, reveals that in the European region, 59pc of adults and almost one in three

children – 29pc of boys and 27pc of girls – are overweight or living with obesity. Obesity prevalence for adults in the European region is higher than in any other WHO region except for the Americas.

Overweight and obesity are among the leading causes of death and disability in the European region, with recent estimates suggesting they cause more than 12 million deaths annually, corresponding to more than 10pc of total mortality in the region.

"Obesity increases the risk for many conditions, including cancers, cardiovascular

disorders, type 2 diabetes and chronic respiratory diseases.

For example, obesity is considered a cause of at least 13 different types of cancer, and is likely to be directly responsible for at least 200,000 new cancer cases annually across the European region, with this figure set to rise further in the coming years.

Overweight and obesity are also the leading risk factor for disability, causing 7pc of living years lived with disability in the region. Overweight people and those living with obesity have been

disproportionately affected by the consequences of the Covid-19 pandemic. There have been unfavorable shifts in food consumption and physical activity patterns during the pandemic that will have effects on population health in the years ahead, and will need significant efforts to reverse.

To address the growing epidemic, the report recommends a suite of interventions and policy options that EU member states can consider to prevent and tackle obesity, with an emphasis on building back better after the Covid-19 pandemic.

"Obesity knows no borders. In the Europe and Central Asia region, no single country is going to meet the WHO Global NC 7 target of halving the rise of obesity," said Dr Hans Henri B. Stue, WHO regional director for Europe.

"The countries in our region are incredibly diverse, but every one is challenged to some degree. By creating environments that are more enabling, promoting investment and innovation in health, and developing strong and resilient health systems, we can change the trajectory of obesity in the region."

The causes of obesity are complex. But environmental factors such as living standards and sedentary lifestyles are drivers of the problem, the WHO report found.



Comment

Mary

Kenny

Twenties

was

nothing

at all like

the

Downton

Abbey.

but fit

and

escapism

is still

enchanting

25

Irish Independent

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Today's weather

	AM	PM
Abbeey	Cloudy MC	Cloudy MC
Ballyn	Cloudy DC	Cloudy MC
Ballyn	Cloudy DC	Cloudy MC
Ballyn	Cloudy DC	Cloudy MC
Cadins	Cloudy DC	Cloudy DC
Carraig-Duane	Cloudy DC	Cloudy DC
Cullinstown	Cloudy DC	Cloudy DC
Lah	Cloudy DC	Cloudy DC
Derry	Cloudy DC	Cloudy DC
Donagh	Cloudy DC	Cloudy DC
Drinbeg	Cloudy DC	Cloudy MC
Dublin	Cloudy DC	Cloudy DC
Galway	Cloudy DC	Cloudy DC
Glenties	Cloudy DC	Cloudy DC
Lisnakee	Cloudy DC	Cloudy MC
Portlaoine	Cloudy DC	Cloudy MC
Rooskey	Cloudy DC	Cloudy MC
Sligo	Cloudy DC	Cloudy DC
Waterford	Cloudy DC	Cloudy DC
Wexford	Cloudy DC	Cloudy DC

OUTLOOK

A cloudy start with patchy light rain or drizzle and any early mist will clear. It will then be cloudy with a chance of showers. However, cloud will break and sunny patches will develop during the afternoon and evening. Light to gale winds.

BRIGHT
Sun rises 05:44
Sun sets 20:29
Lighting up 17:30

MOON PHASE
First Quarter May 29
Rises 07:30
Sets 01:25

LOCAL WEATHER UPDATES	
Call 0800 224 244	Free updates 1 time per day 10:15
Monday	015 015
Tuesday	015 015
Wednesday	015 015
Thursday	015 015
Friday	015 015
Saturday	015 015
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The Real Pandemic

Fatty liver affects 25% of our population – directly related to calorific food intake

25% will have NASH

30% of these will have significant fibrosis

20% of type II DM have clinically significant fibrosis

Rate of progression

- 1 stage every 7 years
- 10% of NASH - cirrhosis
- **But 20% progress to cirrhosis in 10 years**

NASH cirrhosis now the leading indication for transplant in females and 2nd in males

Case

46 year old male with fatigue

Hypertension, hyperlipidaemia, BMI 30Kg/m², impaired fasting glucose

Rare alcohol

On Rosuvastatin

ALT 67 IU/L

AST 47 IU/L

GGT 80 IU/L

ALK P 140 IU/L





History

What symptoms?

Why?



Examination

Helpful symptoms in making your assessment

Abdominal pain

Dark urine

Itching

Assess risk factors

Alcohol intake
21 units//14
units

Viral risk

Metabolic
syndrome/auto-
immune

Drug history -
including herbal
remedies

Family history



Our patient

You're concerned about alcohol



Nail the history

How many pints of beer do you consume on a Friday, Saturday etc?

What percentage proof?

How many bottles of wine do you drink in a week?

How long does a bottle of gin last?

Helpful indicators for alcohol excess

AST/ALT ratio >2

GGT

MCV

IgA

(Blood alcohol)

ALT invariably <300

Our patient

You remain to be convinced
about his reported alcohol
intake!

PEth testing – The HBA1c of alcohol consumption

Phosphatidyl ethanol
(PEth)

formed on surface of the
red blood cell

ethyl alcohol reacts with
phosphatidylcholine, in a
reaction catalysed by
phospholipase D

sensitive and specific -
detects excessive alcohol
intake within a two-week
period.

0-20 ng/ml – negligible
alcohol intake

20–199 ng/ml - significant
consumption

> 200ng/ml – heavy
consumption





What next for our patient?

The Chronic Liver Disease screen

- Viral
- HBV & HCV; hep a (?VACCINATE IN FUTURE)
- hepatitis E - especially if immunosuppressed

- Immunological
- Auto antibodies – ANA, smooth (AIH) , LKM (AIH), mitochondrial (PBC),
- Coeliac anti-bodies
- Immunoglobulins – IgA (alcohol), IgG (AIH), IgM (PBC)
- IgG4

- Metabolic
- Lipids/glucose/HbA1c
- Ferritin/transferrin satn >50%(fasting)
- Alpha 1 antitrypsin levels
- Copper studies – caeruloplasmin; 24 hour urinary Cu

FBC

Coagulation

Our case



Liver screen normal



US – increased echogenicity



Diagnosis as expected...what next?

Non invasive assessment of fatty liver

FIB-4 score

Age

ALT

AST

Platelets

NAFLD FIBROSIS

Age

ALT

AST

Platelets

Albumin

BMI

Diabetes/Pre-
diabetes

APRI score

AST

Platelets

ELF test

TIMP 1

Procollagen

Hyaluronic
acid

Direct
fibrosis
biomarker

FIB 4 SCORE

- Simple
- Quick
- Inexpensive – no added cost
- Use online calculator – MD Calc

- score <1.3
 - 70-80% of our patients
 - Negative predictive value for F0-F2 is 93%

- Score > 2.6
 - 96% specificity for advanced fibrosis
 - 66% positive predictive value

Fibrosis-4 (FIB-4) Index for Liver Fibrosis ☆

Noninvasive estimate of liver scarring in HCV and HBV patients, to assess need for biopsy.

When to Use ▼

Pearls/Pitfalls ▼

Why Use ▼

About the Creator



Dr. Richard Sterling ✓

Also from MDCalc...

Related Calcs

- [NAFLD Fibrosis Score](#)
- [HIV CKD Prediction](#)
- [MELD Score \(New\)](#)

Age

Use with caution in patients <35 or >65 years old, as the score has been shown to be less reliable in these patients

years

AST

Aspartate aminotransferase

U/L

ALT

Alanine aminotransferase

U/L

Platelet count

$\times 10^9/L$ ↔

1.32 points

Further investigation needed

Approximate fibrosis stage: Ishak 0-1 (Sterling et al 2006)

Copy Results

Next Steps »»

MD+ CALC Log in SIGN UP

Fibrosis-4 (FIB-4) Index for Liver Fibrosis ☆

Noninvasive estimate of liver scarring in HCV and HBV patients, to assess need for biopsy.

When to Use ▾ Pearls/Pitfalls ▾ Why Use ▾

Age years
Use with caution in patients <35 or >65 years old, as the score has been shown to be less reliable in these patients


AST Aspartate aminotransferase U/L

ALT Alanine aminotransferase U/L

Platelet count × 10⁹/L ↗

2.40 points
Further investigation needed
Approximate fibrosis stage: Ishak 2-3 (Sterling et al 2006)

Copy Results 📄 Next Steps >>>

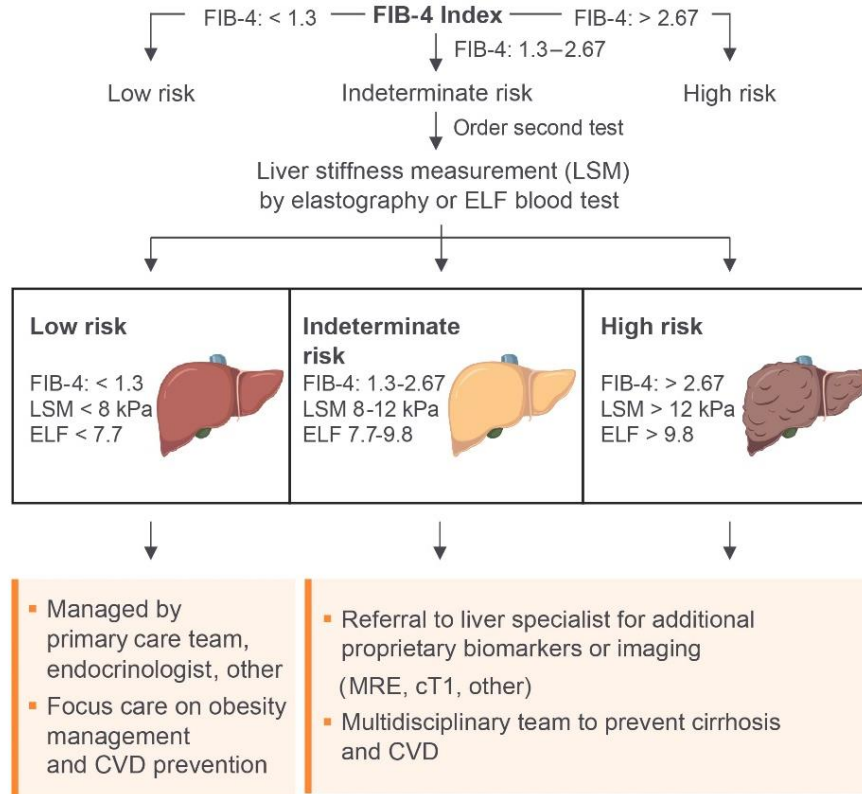
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Fibrosis Risk Stratification



FIBROSCAN

quick
accurate

expensive
trained staff
limited resource



Management of suspected fatty liver

Target	<p>Target high risk groups</p> <ul style="list-style-type: none">•ALT/AST over 30IU/L•fatty liver on imaging•diabetes/pre-diabetic•obesity with cardio-metabolic disease
Weight	<p>Weight loss – aim for 10% loss – no caloric excess not NAFLD!</p>
Manage	<p>Manage hypertension, diabetes, hyperlipidaemia</p>
Stratify	<p>Stratify risk of fibrosis</p>

Goal – halt inflammation and reverse fibrosis

- Vitamin E – 400-800iu; non diabetic/non cardiometabolic patients
- Pioglitazone - non diabetic or diabetic patients
- GLP-1 RA – DIABETIC PATIENT
 - Dulaglutide (Trulicity), Semaglutide (Ozempic), Liraglutide (Victoza)
- SGLT 2 – reduce liver fat but ?fibrosis
- Bariatric surgery?

Emerging treatments

- Obeticholic acid
- Resmitron (Thyroid hormone receptor agonist)
 - 955 patients – at year resolution of NASH and improved/stable fibrosis

Treatment of NASH

Key points

Pandemic

Know who to screen

Risk stratify your patients using the FIB-4 score

Aim for >10% weight reduction and manage the add ons

Pharmacotherapy for those with fibrosis....



THE DR KELLY SALAD

AVAILABLE AT
FOOD CREW
IN MARCH

*"A DELICIOUS
HEART HEALTHY
MEDITERRANEAN
SALAD"*



**RECIPE FROM DR ROBERT KELLY
BEACON HOSPITAL'S CONSULTANT IN
CARDIOLOGY AND LIFESTYLE MEDICINE**

A large, stylized, light blue 'S' shape is positioned on the left side of the slide, partially overlapping the main text area. The background is a solid dark blue.

Thank you

Fibroscan

- **Transient elastography**

- shear waves propagate faster in fibrotic tissue
- Takes 5 minutes
- 2 readings
 - CAP score – burden of fat
 - Liver stiffness – severity of scarring
- $F \geq 1$: 7.1 kPa, sensitivity 75 percent, specificity 78 percent
- $F \geq 2$: 7.8 kPa, sensitivity 77 percent, specificity 83 percent
- $F \geq 3$: 8.0 kPa, sensitivity 92 percent, specificity 76 percent
- F4 (cirrhosis): 11.5 kPa, sensitivity 81 percent, specificity 61 percent