

**ZOOM
forward**

ECO
IFSO-EC

Congress on Obesity
Maastricht, 4-7 May 2022

**Impact of NASH on postoperative
textbook outcome after bariatric surgery:
A large prospective cohort study**

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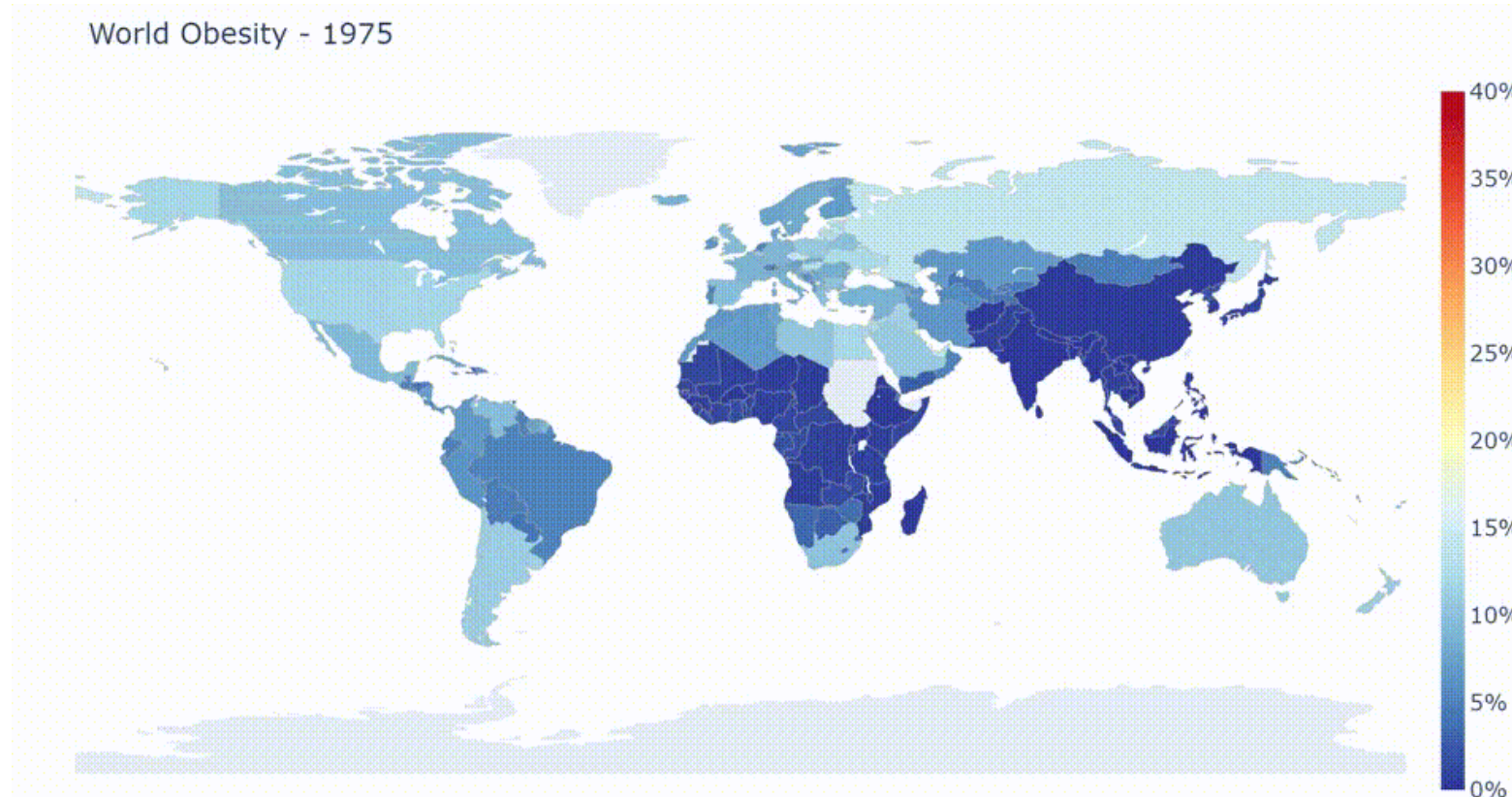


Conflict of interest

None



Increased prevalence of obesity class II and III (IMC ≥ 35)



Prevalence of obesity worldwide - @CAnthonyScott



Metabolic surgery as an answer – how safe is it?



Roux-en-Y Gastric Bypass (RYGB)



Vertical Sleeve Gastrectomy (VSG)



30-days mortality
and morbidity:
0.3% and **4.3%**



Adjustable Gastric Band (AGB)



Risks factors associated with increased risk



Roux-en-Y Gastric Bypass (RYGB)



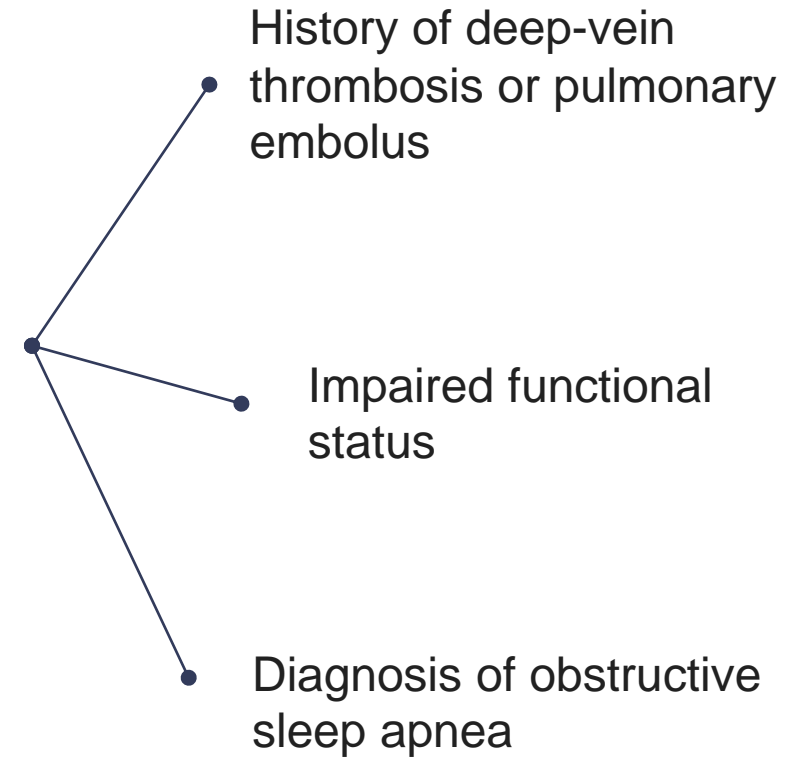
Vertical Sleeve Gastrectomy (VSG)



Adjustable Gastric Band (AGB)



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What about surgery risk and liver health?



Liver complications associated with major post-operative morbidity in all kind of surgeries

Liver complications contraindicates bariatric surgery

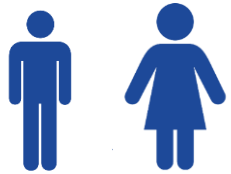


What are the risk for NASH patients without liver complications?



ABOS prospective cohort

1,541 patients undergoing RYGB, SG or GB between 2006 and 2021



27% male,
73% female



Mean BMI (\pm sd):
46.9 (\pm 7.7)



18% healthy liver
72% with NAFL
10% with NASH



37% with diabetes



Assessing post-operative complications

A novel quality measure: the textbook outcome

- Survival at 30 days
- No serious post-operative complication (Clavien-Dindo < 3)
- No readmission to hospital within 30 days
- Hospital discharge < 5 days after surgery



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75.7% of operations have textbook outcome



Non-textbook outcome risk factors in ABOS

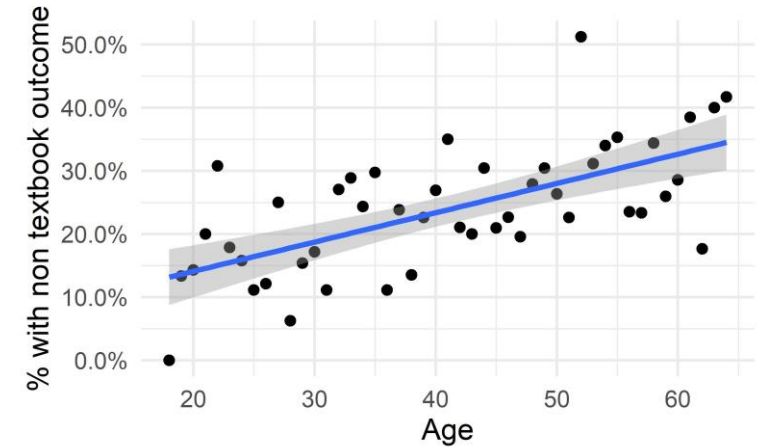
24.3% of operations have non-textbook outcome



Non-textbook outcome risk factors in ABOS

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Varying with age
($p < 0.001$)

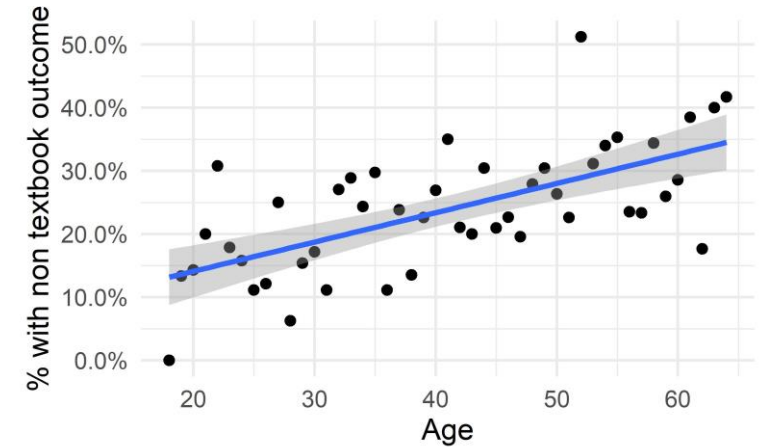




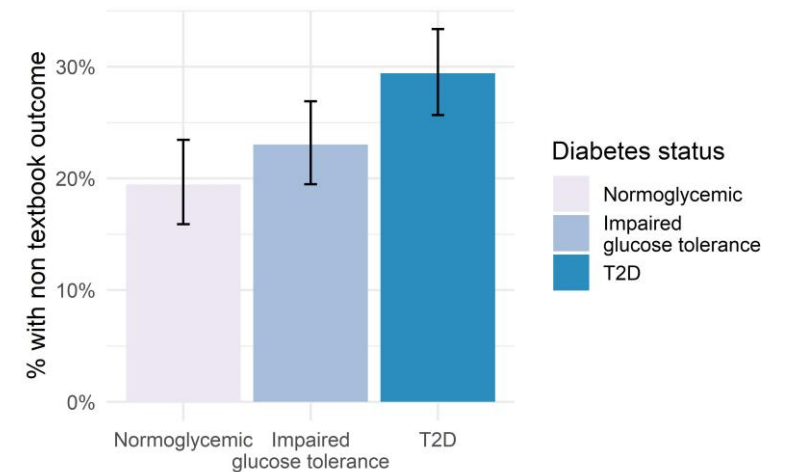
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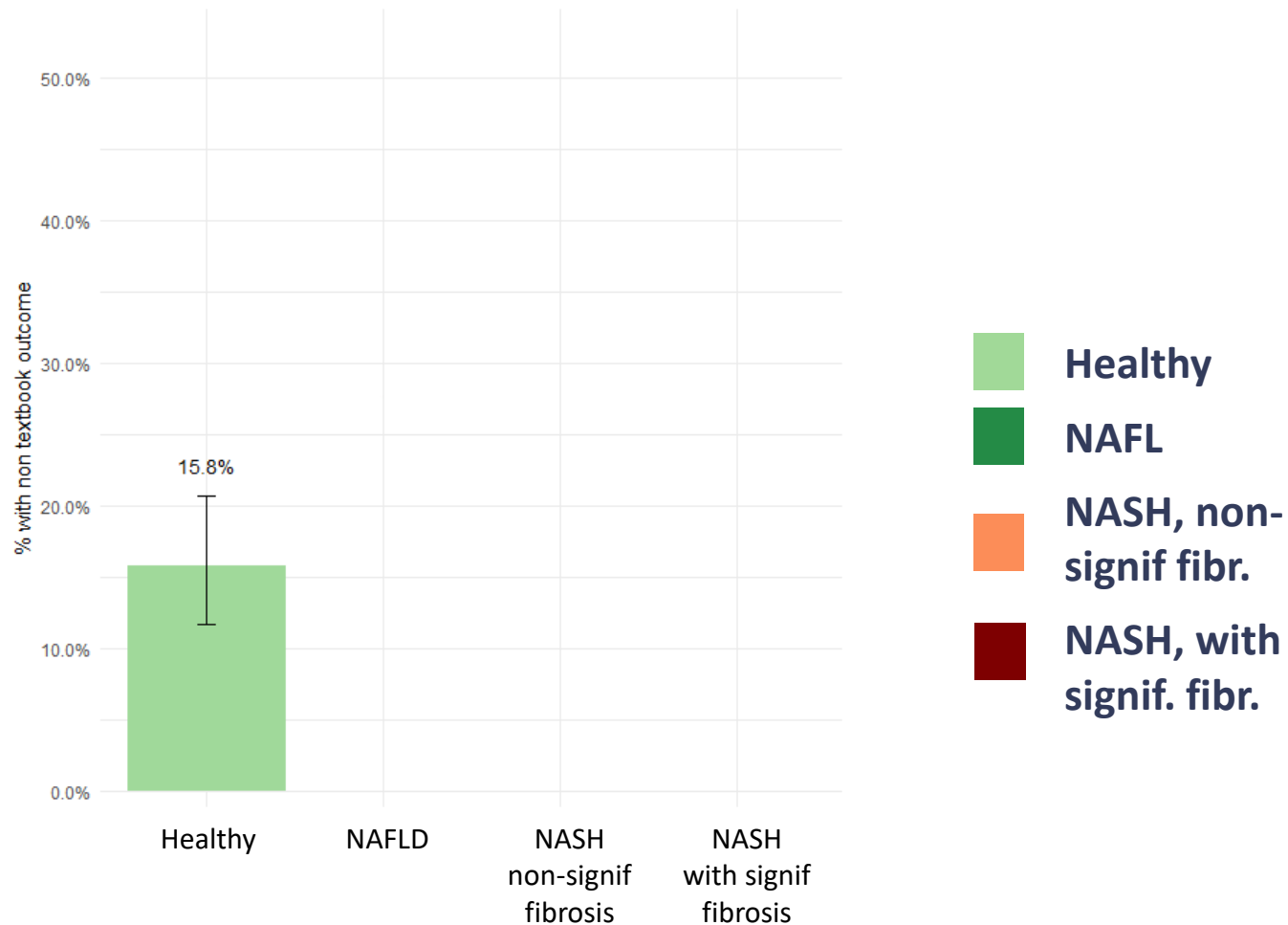


Varying with diabetes
($p < 0.001$)



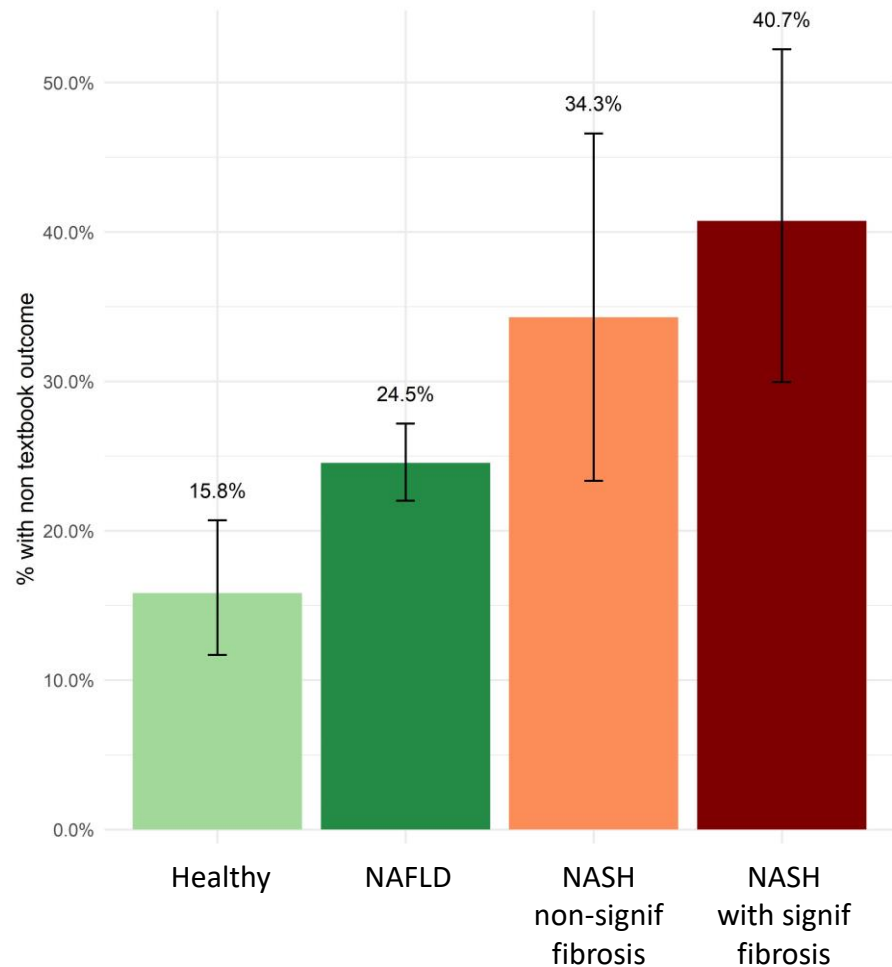


Non-textbook outcome and liver status





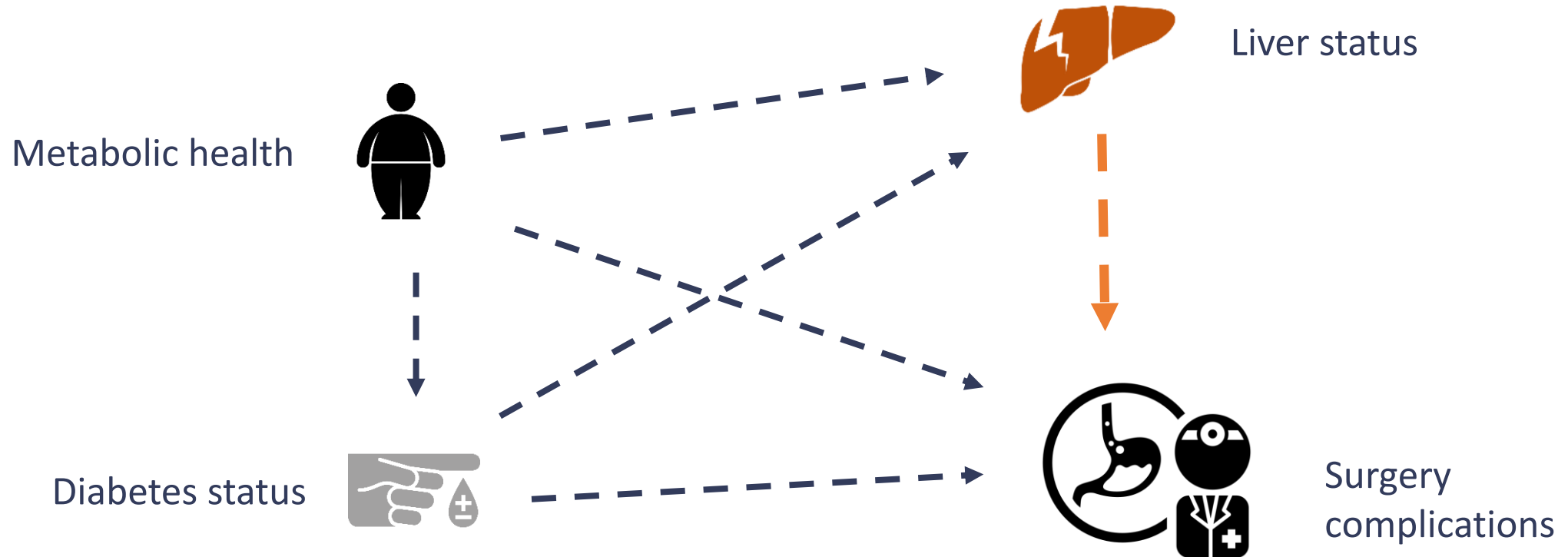
Non-textbook outcome and liver status



	N (%)	Odd Ratio	95% CI	P-value
Healthy	272 (18%)	1.00	Ref	Ref
NAFL	1105 (72%)	1.73	1.22-2.46	0.00235
NASH, non-signif fibr.	70 (5%)	2.78	1.54-5.02	0.0007
NASH, with signif. fibr.	81 (5%)	3.66	2.11-6.35	<0.0001

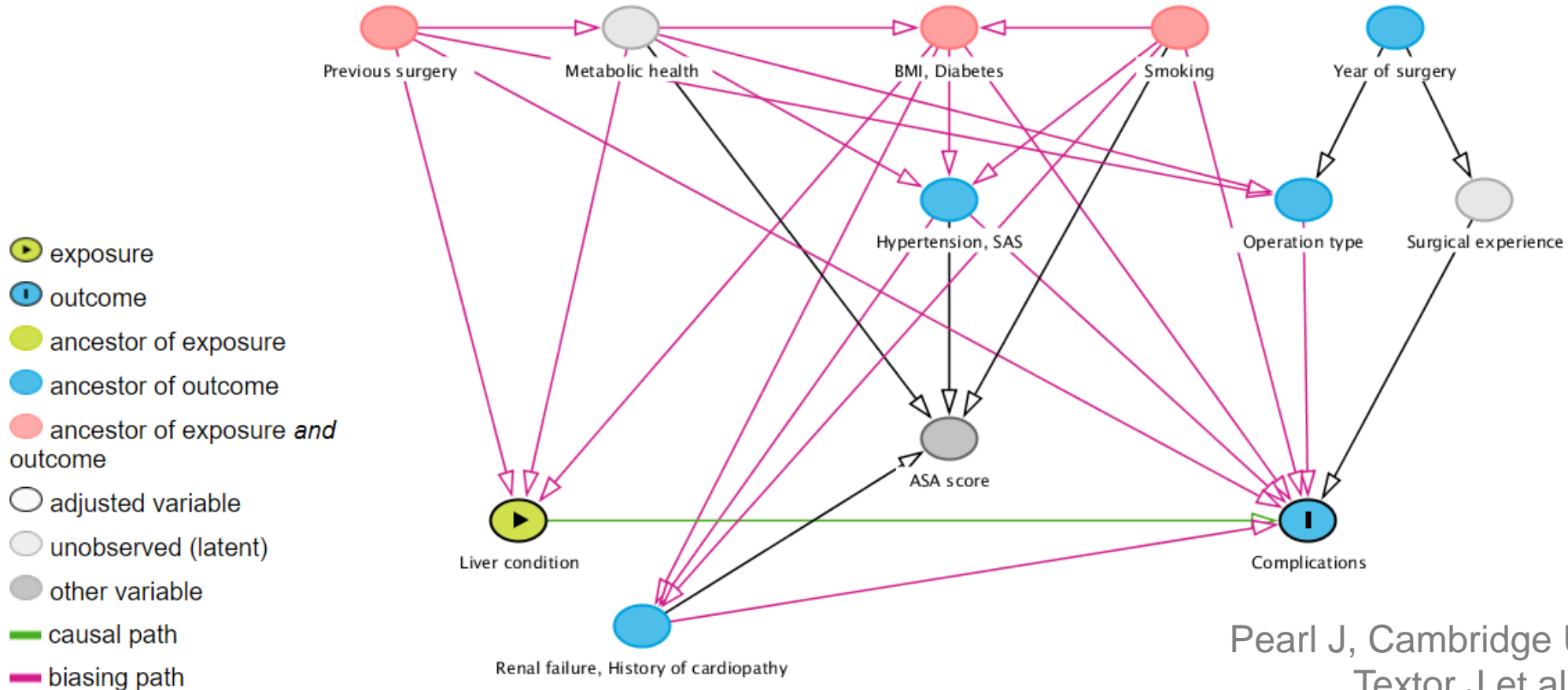


Non-textbook outcome and liver status – Necessity of a multivariable adjustment



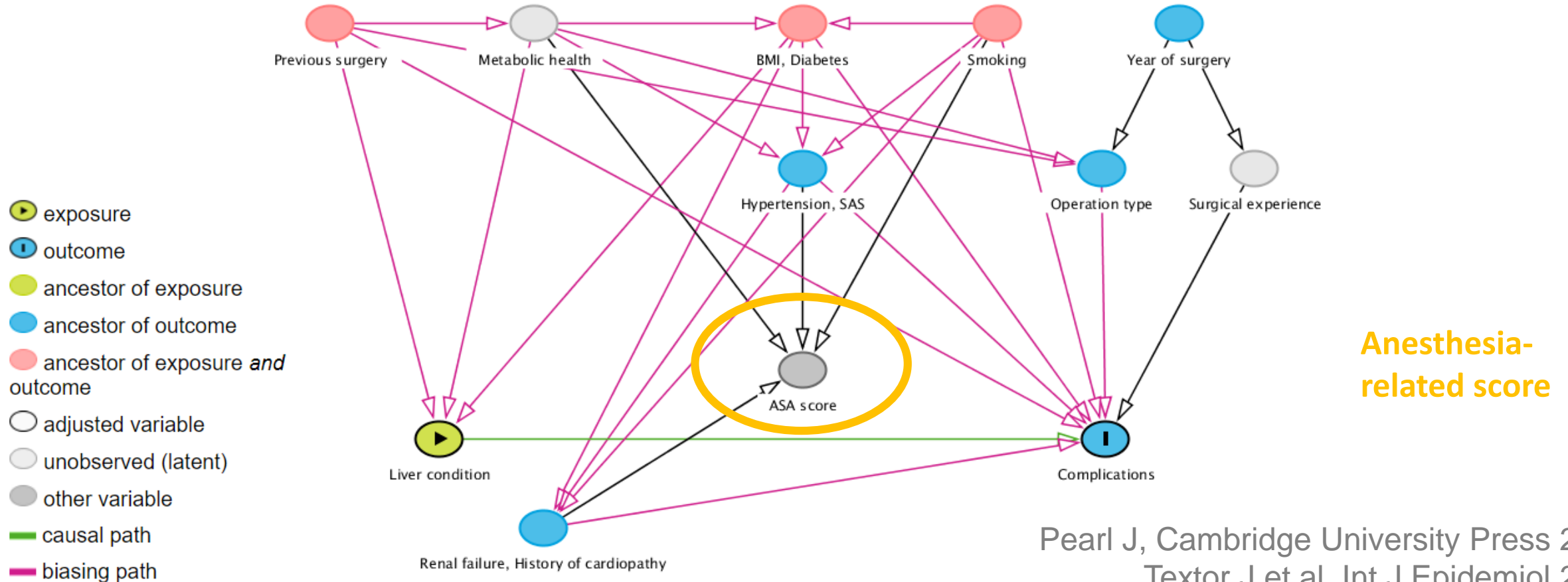


Using DAG (Directed Acyclic Graph) to identify adjustment



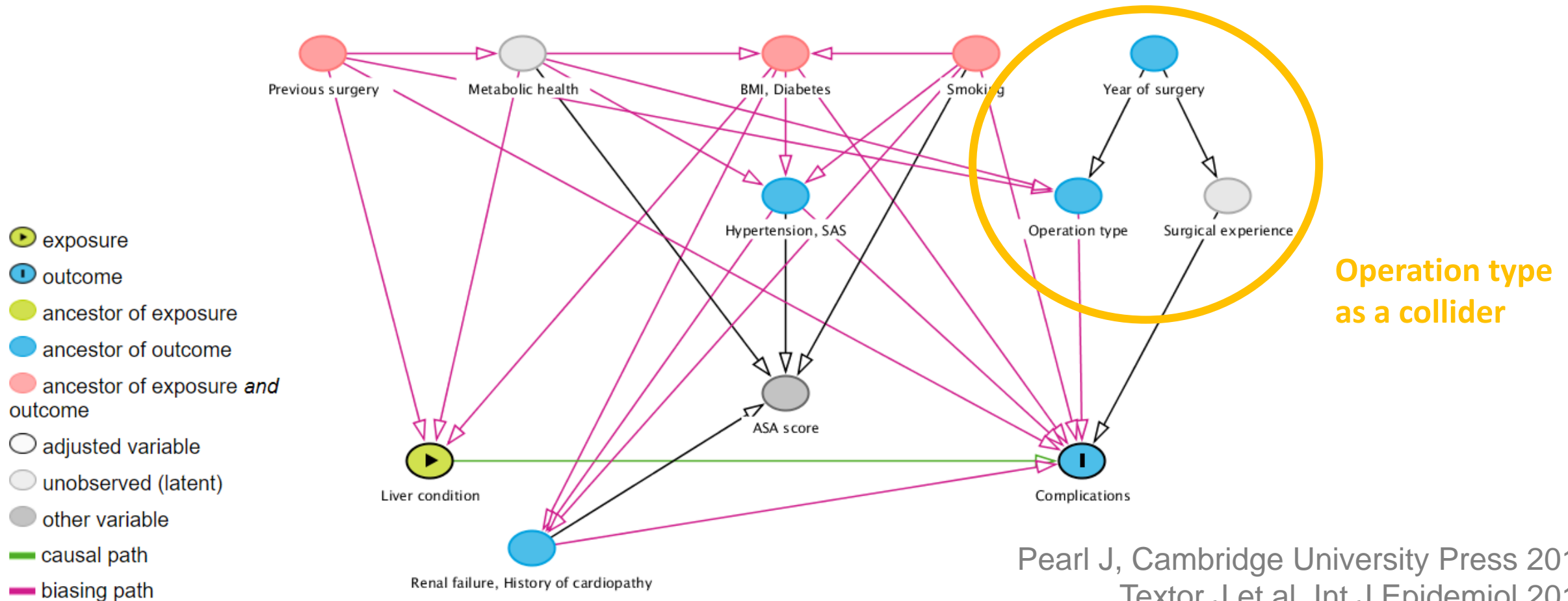


Using DAG (Directed Acyclic Graph) to identify adjustment





Using DAG (Directed Acyclic Graph) to identify adjustment





Direct effect of liver condition on non-textbook outcome

After full adjustment on sex, age, baseline BMI, year of surgery, tobacco exposure, diabetes, hypertension and sleep apnea syndrome by multivariable analysis

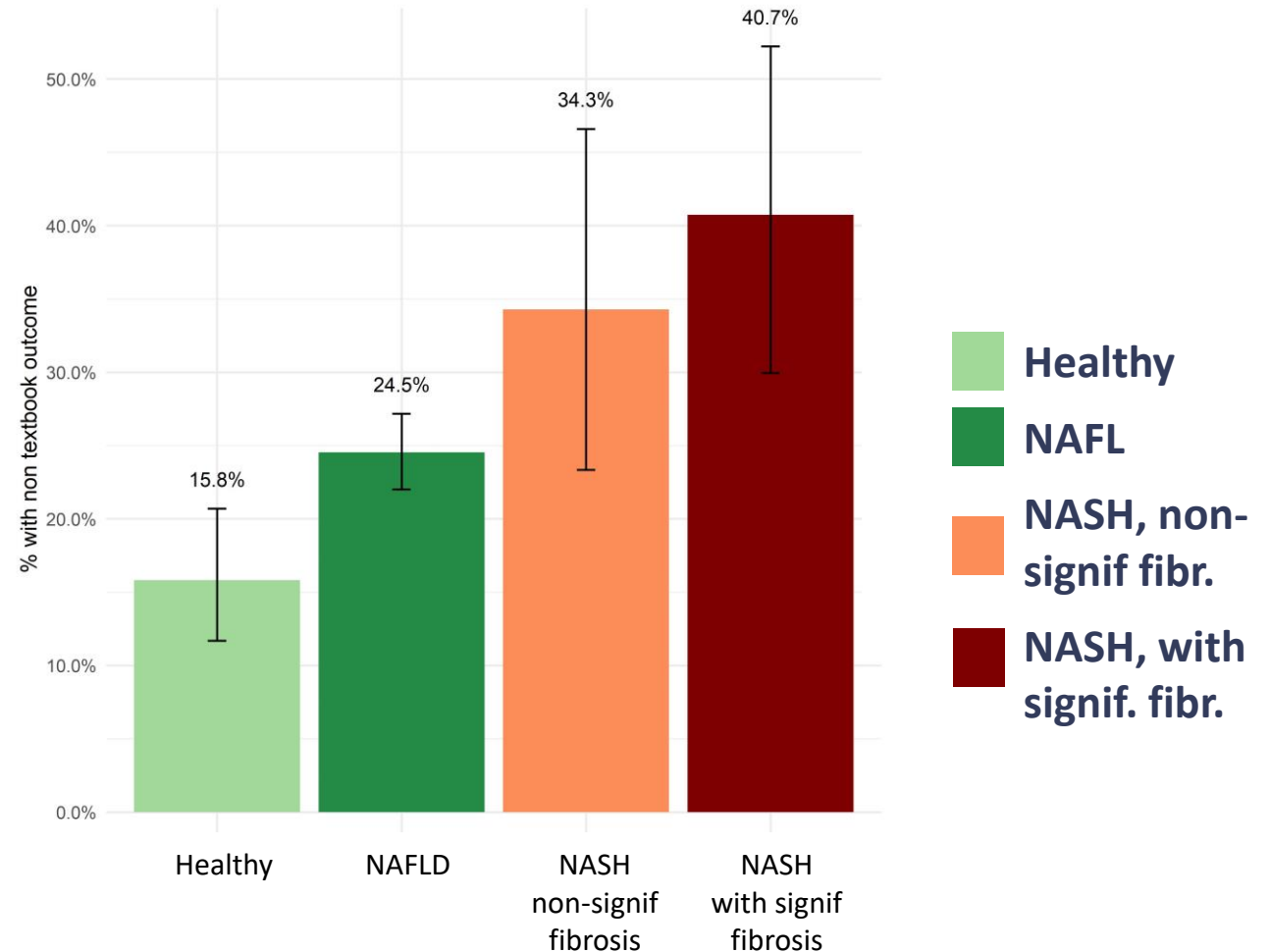
	Odd Ratio	95% CI	P-value
Healthy	1.00	Ref	Ref
NAFL	1.2	0.83-1.81	0.333
NASH without fibr.	2.00	1.03-3.83	0.038
NASH with fibr.	2.18	1.17-4.08	0.0014



Conclusion

Liver condition, and most particularly presence of NASH, seems to directly influence the risk of complications after bariatric surgery.

Early identification and close monitoring of patients with NASH should be considered.



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Thank you

