How to manage outpatients with cirrhosis

RCP Updates in Medicine May 2024

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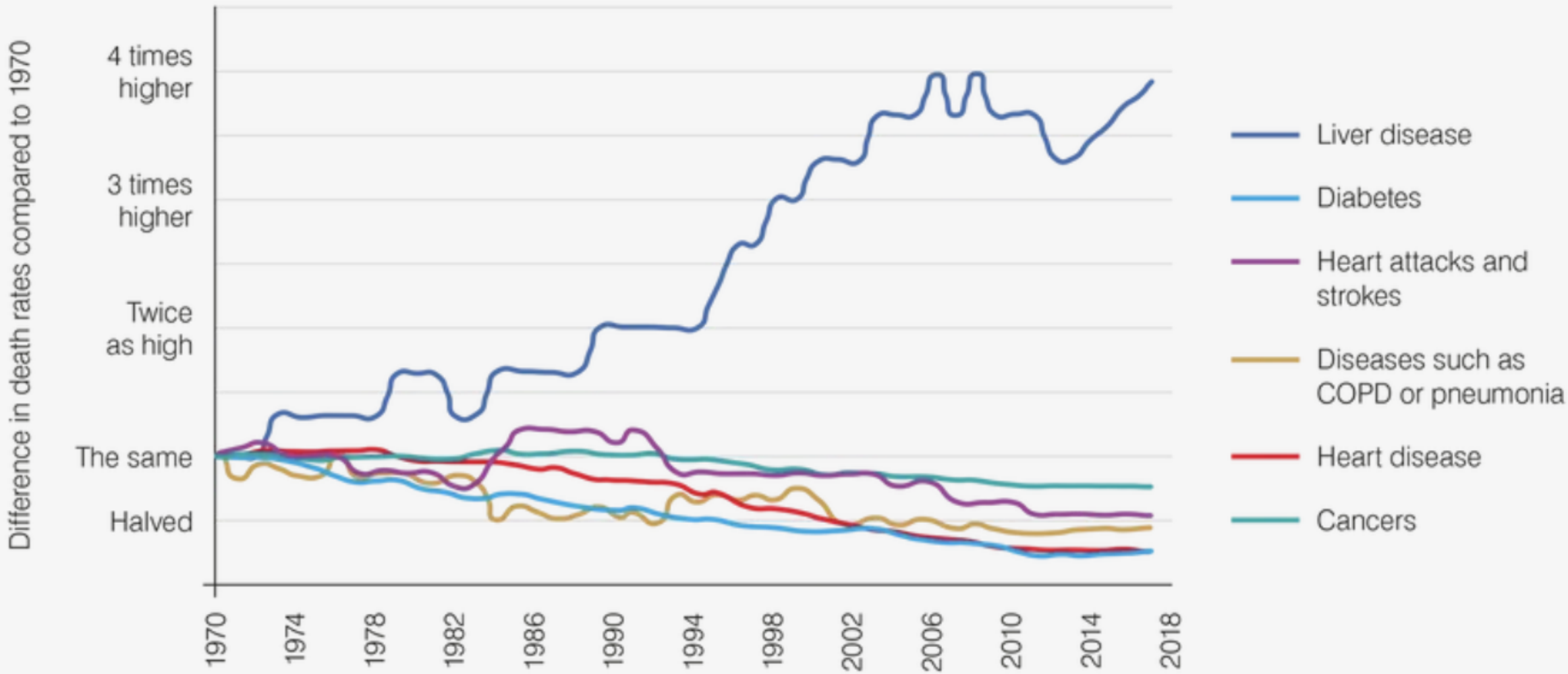
- No disclosures

Outline

- Challenges in managing liver disease
- Compensated versus Decompensated liver disease and NITs
- Recent OP Management of Cirrhosis guidelines
- Decompensated cirrhosis including palliative care and admission avoidance

Acceleration in liver disease death rates compared with other major diseases



Comparison of UK standardised mortality rate data normalised to 1970.

63% increase in premature deaths from liver disease in England in last 20 years

2.5% deaths in England. Half of liver deaths are in people of working age – biggest cause of premature mortality and loss of working years of life in UK

22% increase in hospitalisations with liver disease 2021-2022, 47% increase in last 10 years

74% deaths from alcohol related liver disease occur in hospital

90% of liver disease is preventable

Variations in care

Liver
Research

A national survey of the provision of ultrasound surveillance for the detection of hepatocellular carcinoma

T J S Cross [1], A Villaneuva [2], S Shetty [3], E Wilkes [4], P Collins [5], A Adair [6], R L Jones [7], M R Foxton [8], T Meyer [9], N Stern [10], U Warshow [11], N Khan [12], M Prince [13], S Khakoo [14], G J Alexander [15], S Khan [16], H Reeves [17], Aileen Marshall [18], R Williams [19] on behalf of the Hepatocellular Carcinoma UK (UK HCC) Study Group

PDF

O19 The national audit of non-alcoholic fatty liver disease (NAFLD) identifies variations and shortfalls in delivery of care in the UK

Wenhao Li [1], David Sheridan [2], Stuart McPherson [3], William Alazawi [1]

GIRFT
GETTING IT RIGHT FIRST TIME

Regional variations in inpatient decompensated cirrhosis mortality may be associated with access to specialist care: results from a multicentre retrospective study

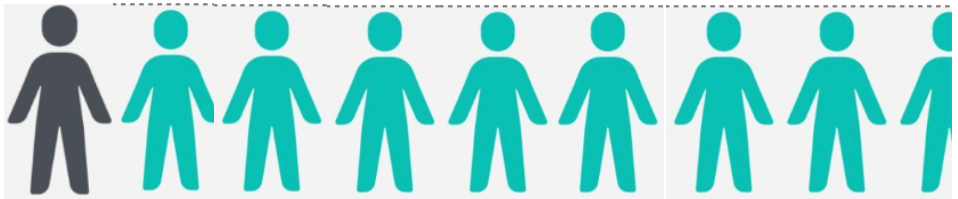
The Trainee Collaborative for Research and Audit in Hepatology UK

Gastroenterology

GIRFT Programme National Specialty Report

Variations in outcome

Premature deaths from liver disease are 4 times higher in areas of high deprivation



12% DNA rate in outpatients

Necessity the mother of invention
Aims of outpatient care

1

Improve outcomes

- Standardise care

2

Improve patient experience

- Focus on vulnerable patients

3

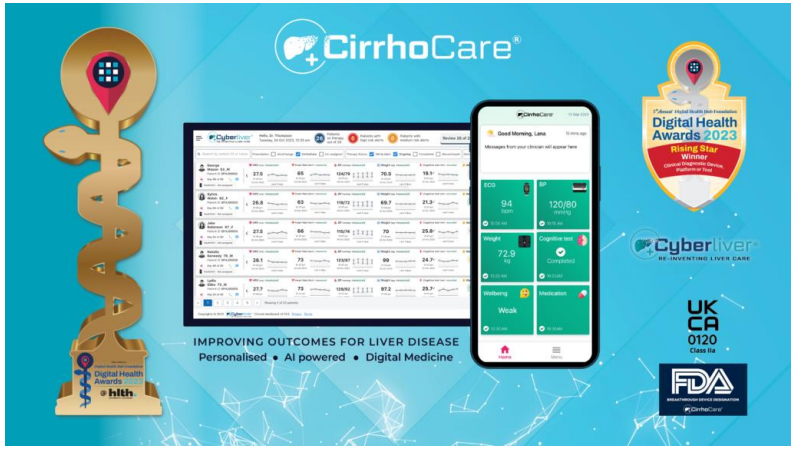
Sustainability

- Manage increased demand
- Workforce burnout
- Green hepatology

Patient Initiated Follow Up (PIFU) Review Pathway Hepatology (cirrhosis)

Patient Information

NHS
Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust



A novel, nurse-led 'one stop' clinic for patients with liver cirrhosis results in fewer liver-related unplanned readmissions and improved survival

Eric Kalo, Asma Baig, Emily Gregg, Jacob George, Scott Read, Wai-See Ma & Golo Ahlenstiel

BMC Gastroenterology **23**, Article number: 356 (2023) | Cite this article

Abstracts

OP38 Sustainable Hepatology and the role of the "Virtual Nurse"

Catherine Wood , Elizabeth Farrington

Improving quality and standardising care

Royal College of Physicians | IQILS

Frontline Gastroenterology

Guideline

British Society of Gastroenterology Best Practice Guidance: outpatient management of cirrhosis – part 2: decompensated cirrhosis

PDF

PDF + Supplementary Material

Dina Mansour [1, 2], Steven Masson [3], Lynsey Corless [4], Andrew C Douds [5], Debbie L Shawcross [6], Jill Johnson [7], Joanna A Leithead [8, 9], Michael A Heneghan [10], Mussarat Nazia Rahim [11], Dhiraj Tripathi [12, 13], Valerie Ross [14], John Hammond [15], Allison Grapes [1], Coral Hollywood [16], Gemma Botterill [17], Emily Bonner [18], Mhairi Donnelly [19], Stuart McPherson [2, 20], Rebecca West [21]

Part 1 - Outpatient management of compensated cirrhosis

Part 2- Outpatient management of decompensated cirrhosis

Part 3 – Special circumstances including pregnancy, surgery, travel, portal vein thrombosis, managing bleeding risk for invasive procedures

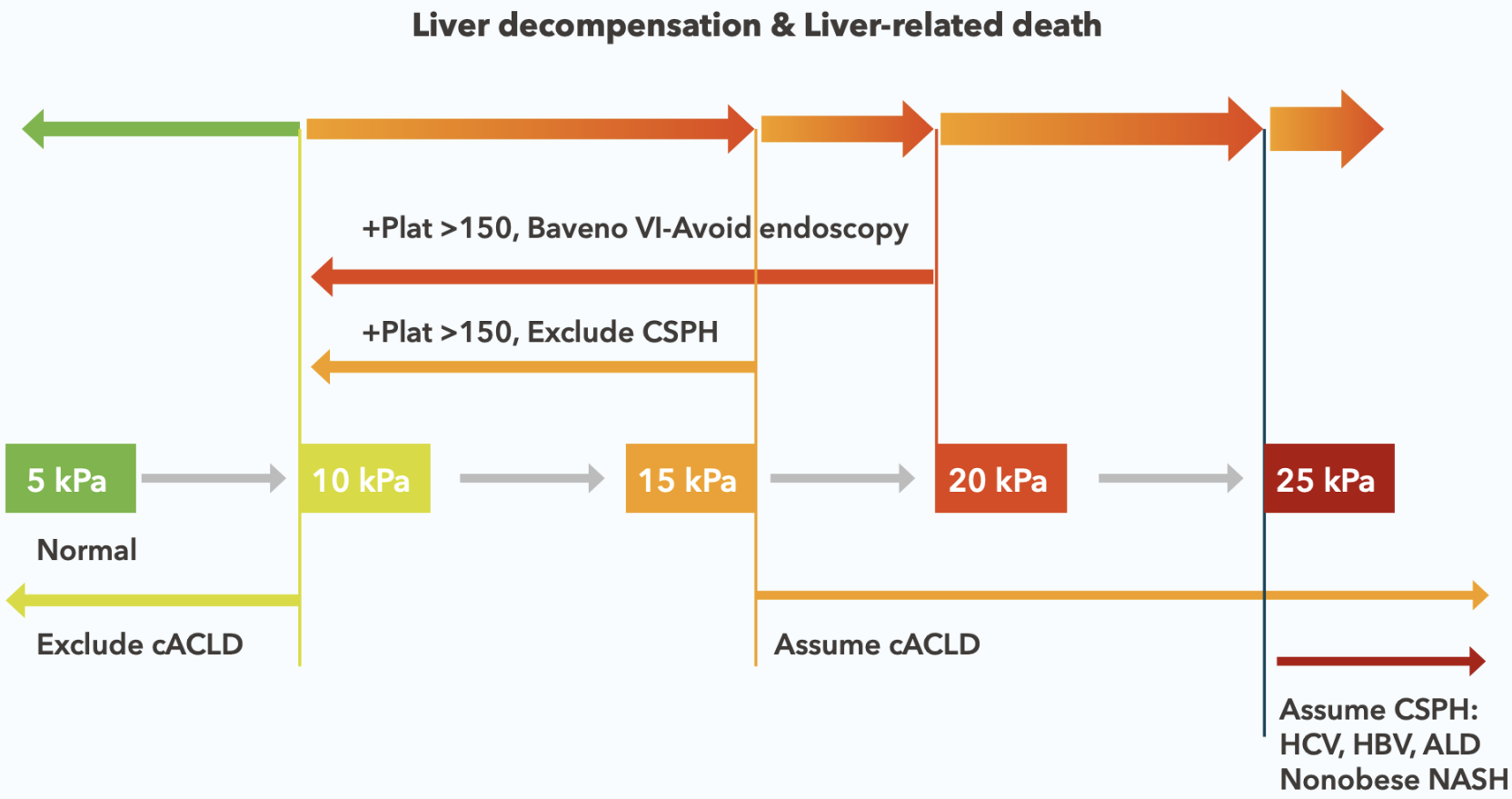
Stages of Cirrhosis

	Compensated Cirrhosis		Decompensated Cirrhosis	
Stage	Stage 1	Stage 2	Stage 3	Stage 4
Clinical	No Varices No Ascites	Varices No Ascites	Ascites +/- Varices	Bleeding +/- Ascites
Death (at 1 Year)	1%	3%	20%	57%

D'Amico G, Garcia-Tsao G, Pagliaro L. Natural history and prognostic indicators of survival in cirrhosis: a systematic review of 118 studies. J Hepatol. 2006;44:217-31

Transient Elastography, Advanced Chronic liver disease (ACLD) and the Rule of Five

FIGURE 1 The rule of five



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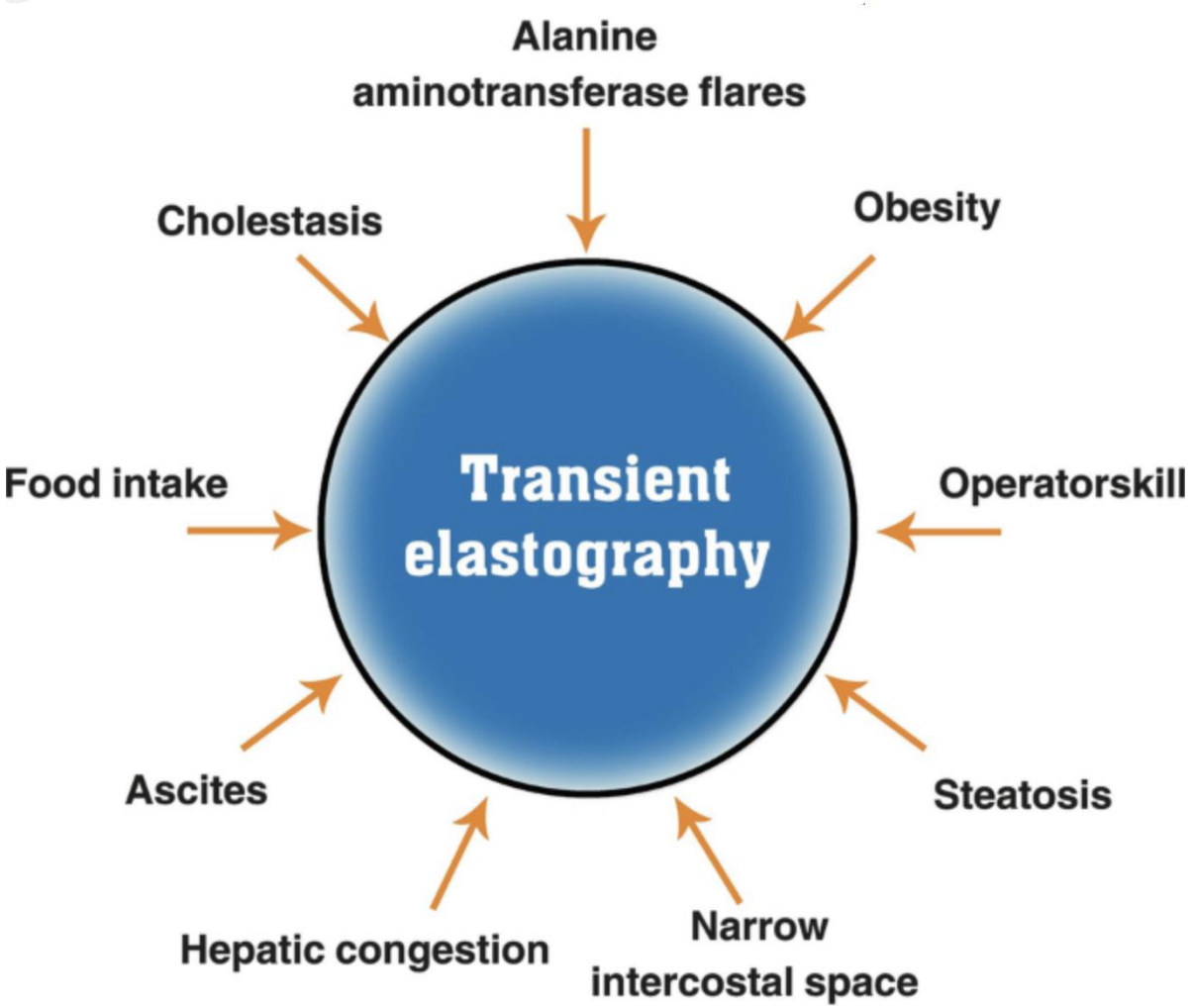

Alanine
aminotransferase flares
Cholestasis
Obesity
Food intake
Transient
elastography
Operatorskill
Ascites
Steatosis
Hepatic congestion
Narrow
intercostal space

Compensated cirrhosis

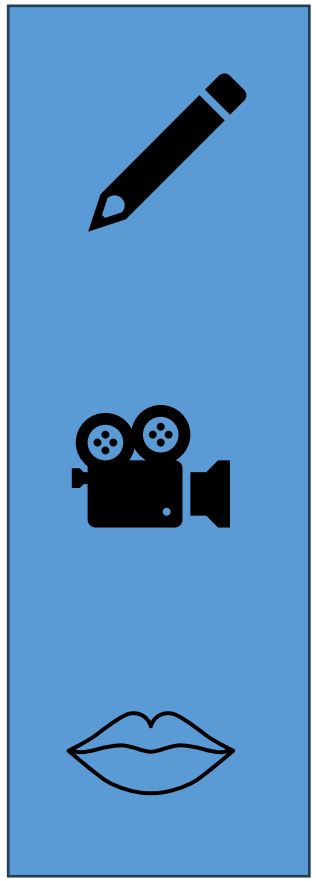
- Prevent further liver damage
- Screening and surveillance

Decompensated cirrhosis

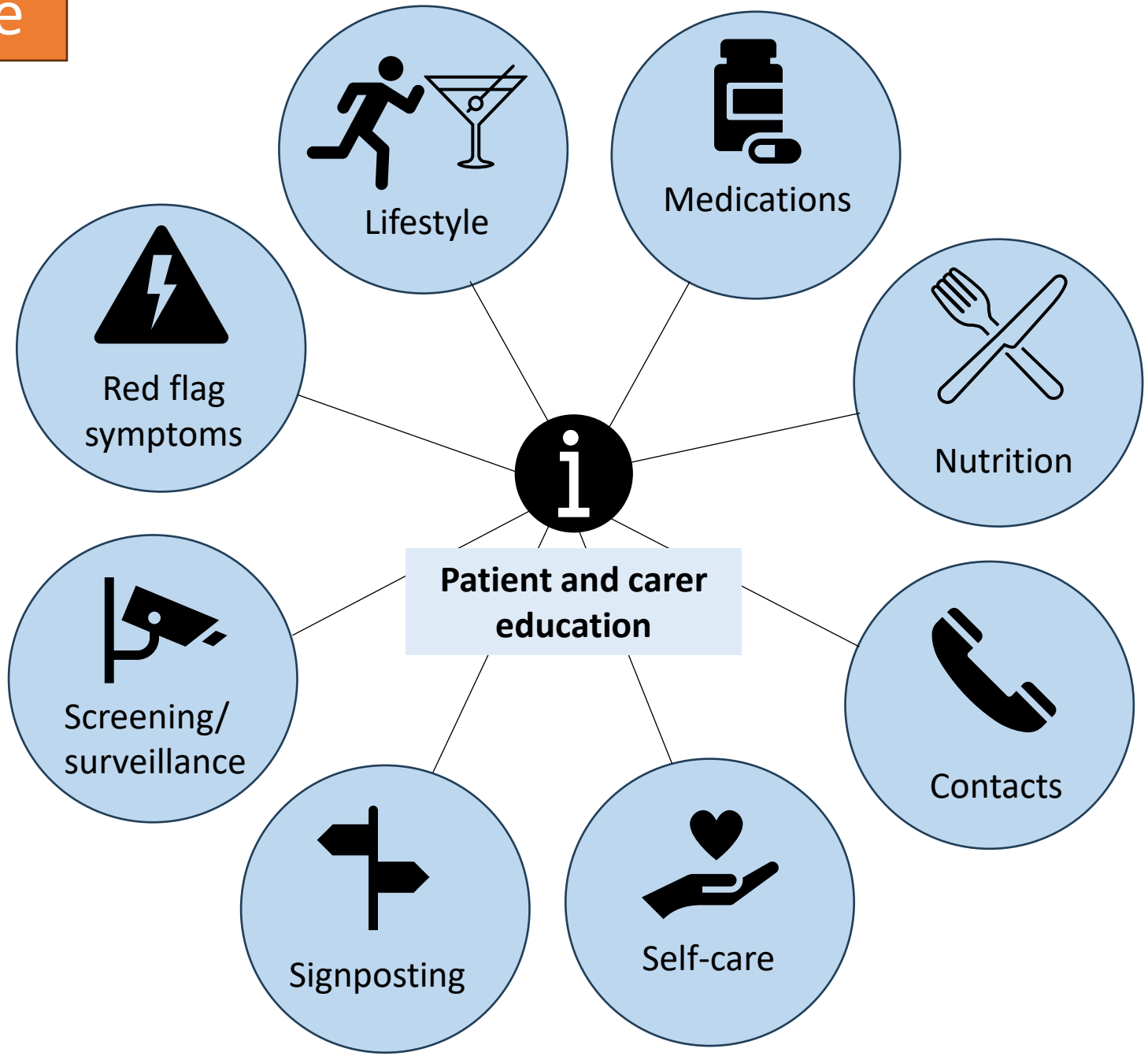
- Promote recompensation
- Managing complications
- Identifying transplant candidates
- Palliative/supportive care
- Nutrition and lifestyle
- Frailty assessment
- Practical support

Holistic care
Promoting and support self-management

Promoting self-care

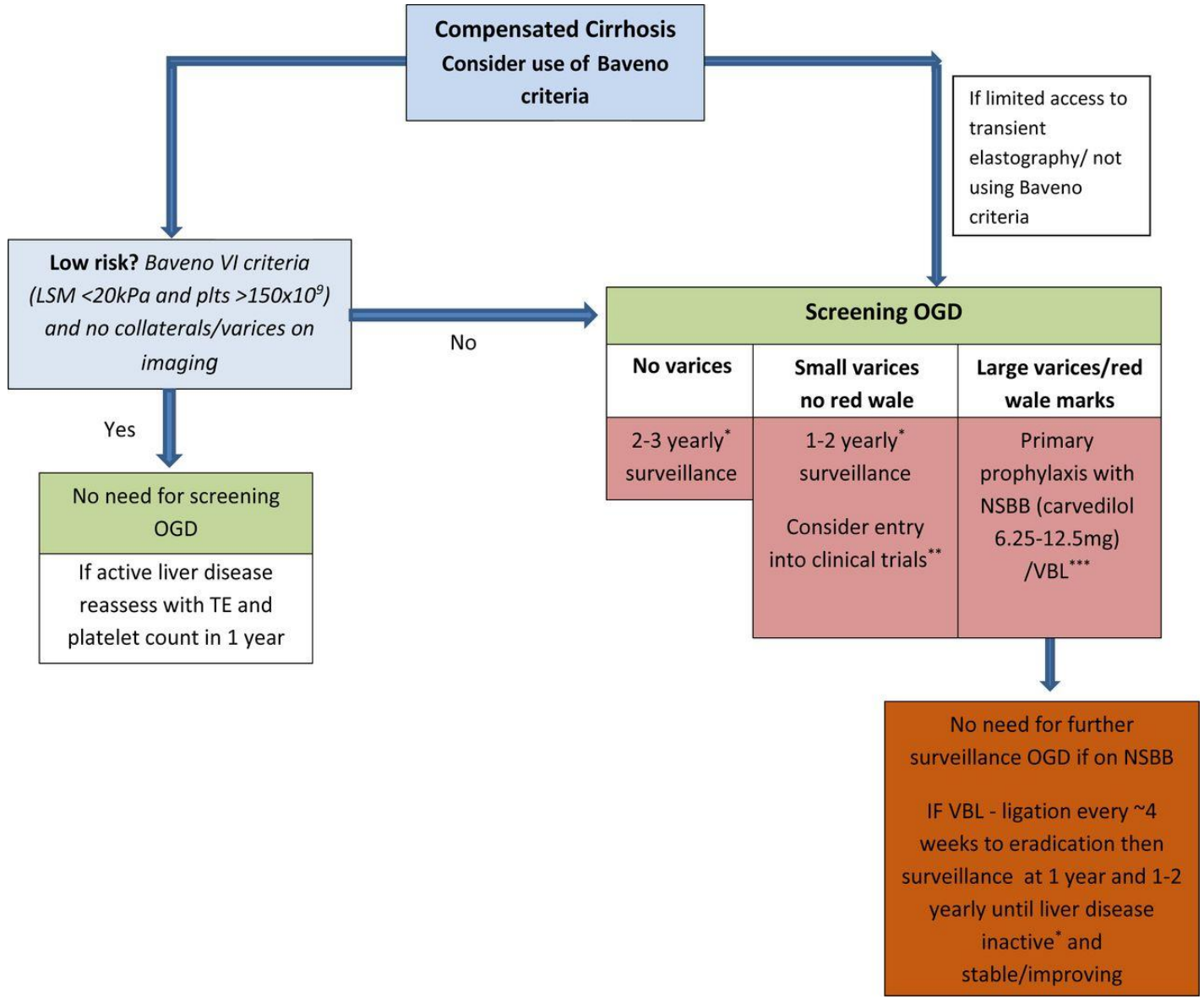


Explain more than once
Explain in more than one way
Explain to carers/family



Cirrhosis (compensated) Outpatient Clinic Care Bundle

1. Diagnosis				
Aetiology of liver disease				
Modality of diagnosis of cirrhosis	Biopsy	LSM	Imaging	Clinical
Liver stiffness measurement	kPa	IQR/Med ratio		
2. Observations				
Weight (kg)	Height (m)	BMI	BP (mmHg)	Pulse
3. Alcohol				
Record recent daily alcohol intake	..... Units			
Thiamine 100mg BD (if potentially harmful alcohol consumption; >50u/week male or >35 U/week female)	Y N N/A			
Advise controlled reduction in alcohol consumption to abstinence	Y N N/A			
Refer to the alcohol team if not already under review	Y N N/A Decline			
4. HCC surveillance				
Under active HCC surveillance	Y N Decline			
Date of last imaging				
Result:				
AFP:				
Arrange follow up imaging (6 monthly ultrasound first line; those with significant comorbidities or poor performance status should be counselled against active monitoring)	Y Stop Decline			
5. Portal Hypertension (see over)				
Varices Y N	Data of last assessment	OGD LSM/pl no-assess		
Size of oesophageal varices	Small (grade 1) Medium (grade 2) Large (grade 3)			
Gastric varices	Y N			
Previous variceal bleed	Y N			
Treatment	Beta-blocker Banding N/A			
Beta-blocker dose optimised (aim HR 60/min with SBP >100 mmHg)	Y N N/A			
Variceal assessment requested	Y N N/A decline			
6. Fracture risk (see over)				
FRAX (+/-BMD)	Date	Low intermediate high N/A		
Treat if high FRAX or osteoporosis	Bisphosphonate denosumab decline			
7. Any features of hepatic decompensation				
Ascites	**HE**	**Jaundice**	**UKELD**	
If any features of decompensation and/or UKELD >49 then consider whether Liver transplantation may be indicated. Complete the decompensated cirrhosis outpatient bundle				
8. Vaccinations				
Advise patients to have relevant vaccinations (Influenza, COVID, Pneumococcal, Hep A & B) Y N Decline				
9. Provide information				
Patient relevant given written information about their liver disease Y N previously				



Patient details

Decompensated Cirrhosis Outpatient Bundle

Varices (see over for management)		
Varices present?	**Y**	**N**
Size of varices? Small (grade 1) Medium (grade 2) Large (grade 3)		
Previous variceal bleed?	**Y**	**N**
Prophylaxis:		
Is patient on a B Blocker? (carvedilol preferred)	**Y**	**N**
If not, why not? _____		
Has dosage been optimised? (aim HR 60/min and SBP >100)	**Y**	**N**
Variceal band ligation?	**Y**	**N**
Is a repeat OGD required? If so, date booked for_____	**Y**	**N**

Hepatic encephalopathy		
Encephalopathy present:	**Y**	**N**
Lactulose	**Y**	**N**
Rifaximin	**Y**	**N**
Lactulose+/- rifaximin advised for patients with persistent or previous un-provoked HE, unless contraindicated		

Ascites		
Ascites present?	**Y**	**N**
Previous SBP?	**Y**	**N**
If yes: Date: Organism (if known)		
Prophylactic antibiotics	**Y**	**N**
If yes: name _____		
If no: reason why_____		
Patients with ascites and an episode of SBP should be considered for antibiotics (secondary prophylaxis) as per local protocol		
Current management of ascites		
Diuretics	**Y**	**N**
Paracentesis	**Y**	**N**
Weight	_____	**Kg**
If ascites controlled consider reducing diuretics	Y	**N/A**
If requiring paracentesis:		
Predicted interval _____weeks		
Day case paracentesis booked for _____		
Or Information given to patient to contact		

Monitoring Renal function and electrolytes
Recommended frequency of U&Es monitoring in the community:

Nutrition		
Dietician review?	Y	N
Supplements required?	Y	N

Substance / alcohol misuse		
Alcohol misuse	**Y**	**N**
Input from alcohol care team/ Community follow up plans	**Y**	**N**
Advice on controlled reduction to abstinence	**Y**	**N**
Thiamine prescribed	**Y**	**N**

Treatment plan		
Has liver transplantation been considered?	**Y**	**N**
Has prognosis been discussed?	**Y**	**N**
Has information been given about complications of cirrhosis	**Y**	**N**
Has a treatment escalation plan been documented	**Y**	**N**
Has palliative care referral been considered	**Y**	**N**

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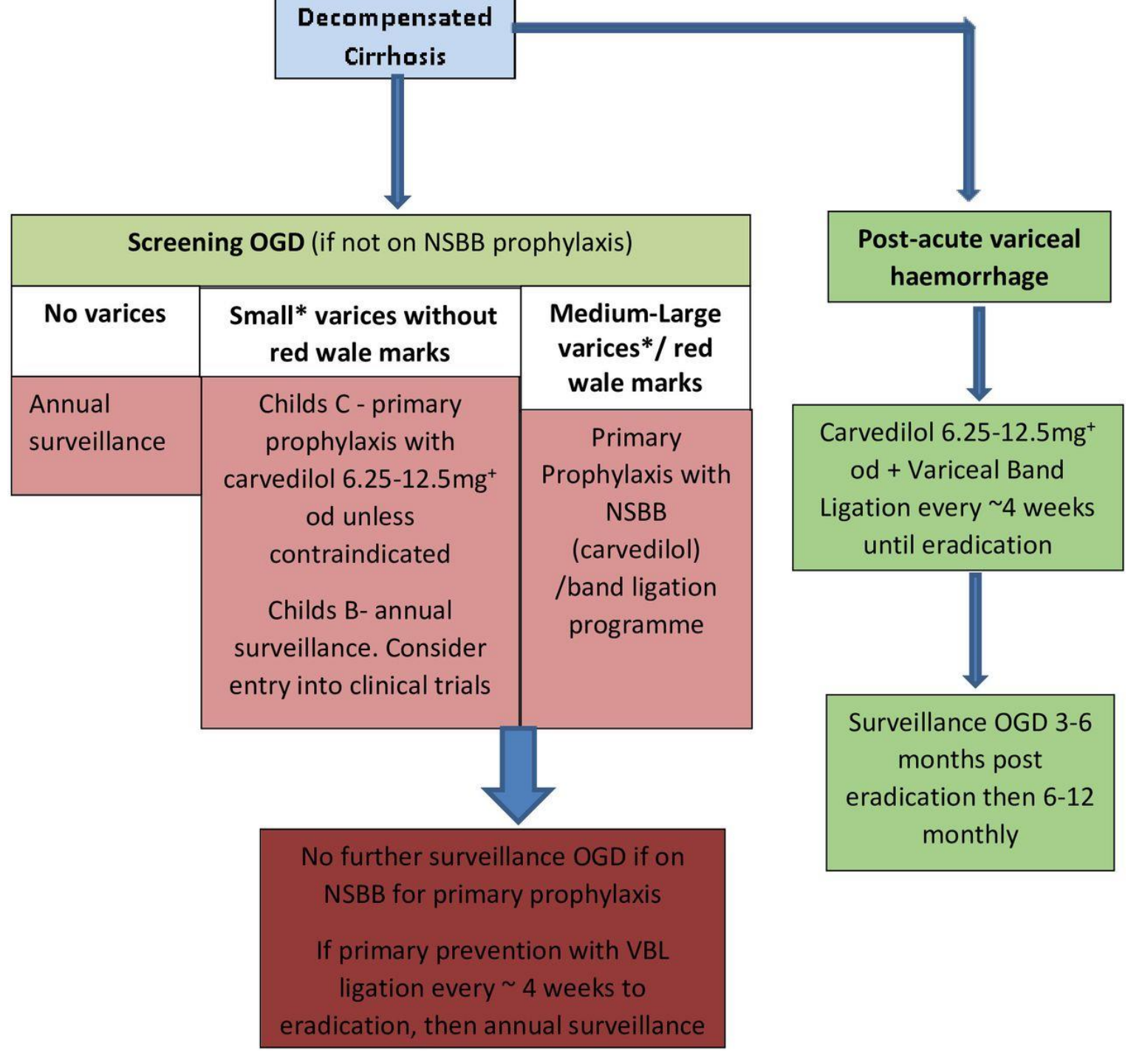


Managing complications

Hepatic encephalopathy

42% transplant-free survival at 1 year

Huge impact on function and QOL

60-80% have minimal HE on testing

Nutrition crucial – high protein and calorie intake

Lactulose +/- rifaximin
Consider home enemas to palliate at EOL

West-Haven criteria			
Covert encephalopathy			
Grade 0 (minimal HE)	Animal naming test	Number of animals named in 1 min (>11)	Examples of psychometric/neurophysiological tests
	Critical flicker frequency		
	Stroop test		
	Psychometric Hepatic Encephalopathy Score		
	EEG		Poor sensitivity and specificity in minimal HE
Grade 1	Trivial lack of awareness, impaired attention span, altered sleep, euphoria or depression		
Overt encephalopathy			
Grade 2	Asterixis, minimal disorientation to time/place, behaviour/personality change, lethargy, ataxia/slurred speech		
Grade 3	Marked confusion/stupor, gross disorientation, somnolence but responsive to verbal stimuli		Should be used in conjunction with the Glasgow Coma Scale
Grade 4	Coma		

Hepatic encephalopathy and driving consensus

- Patients should not drive for **3 months after overt HE** episode
- Patients with overt HE should inform the DVLA and not drive
- **Even in the absence of overt HE** and concerns short-term memory, disorientation, lack of insight/judgement or impaired attention patient should inform DVLA and not drive.
- If overt HE resolves **on or off** treatment >3 months can reapply for license
- For patients with alcohol use disorder **also** need to be off alcohol for >12 months
- Driving assessment may be required

Managing complications

Ascites

- Secondary prophylaxis after episode of SBP

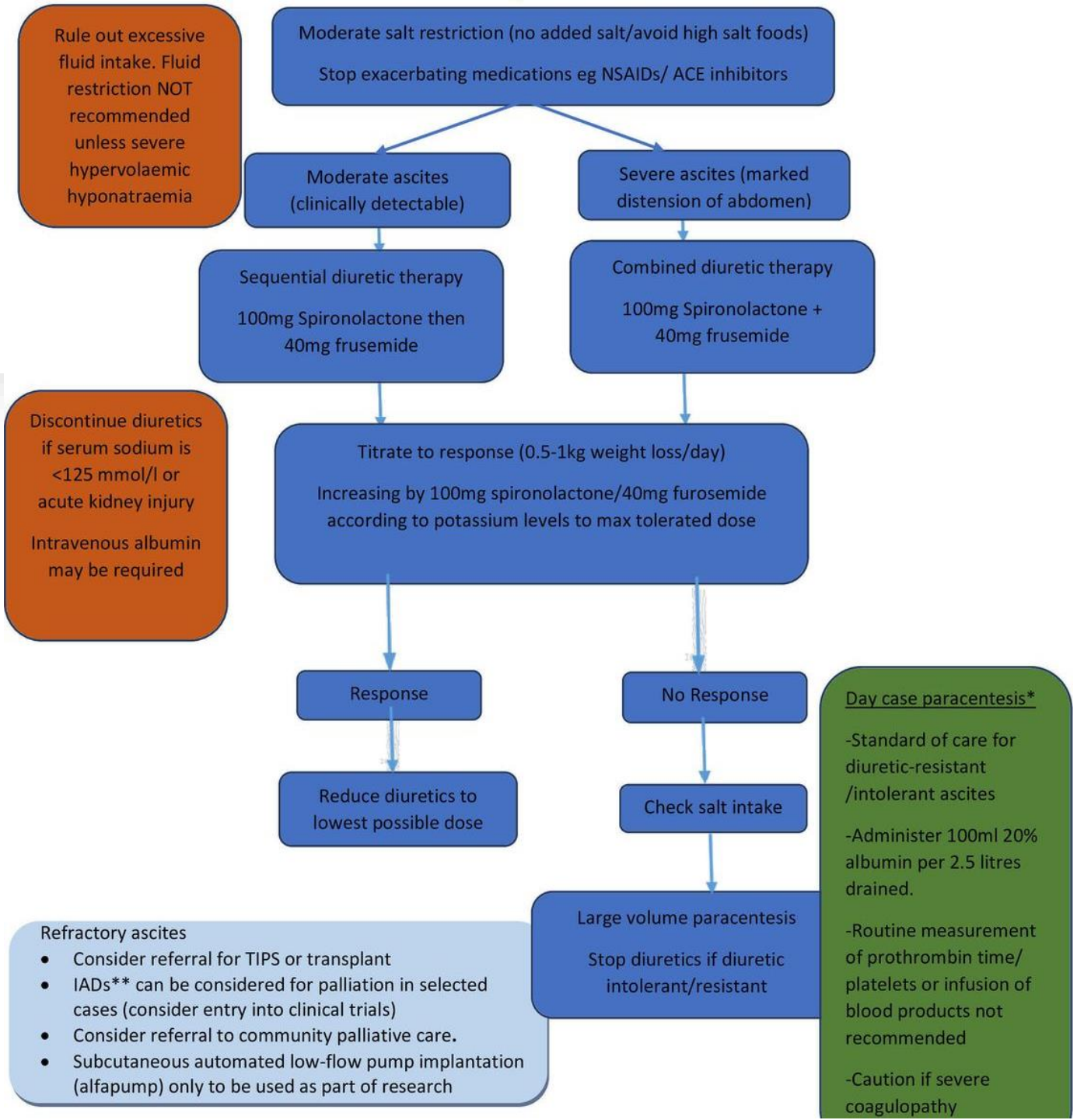
? Primary prophylaxis in high risk (protein <15g/l) - ASEPTIC

? NSBB in refractory ascites –not contraindicated but go low and slow, stop if systolic BP<90mmHg/MAP 65mmHg

? Long term albumin OP administration – PRECIOSA

- Refractory ascites 50% 6-month mortality

? Indwelling abdominal drains- REDUCe2



Nutrition, Sarcopenia and frailty

Malnutrition almost universal in decompensated cirrhosis

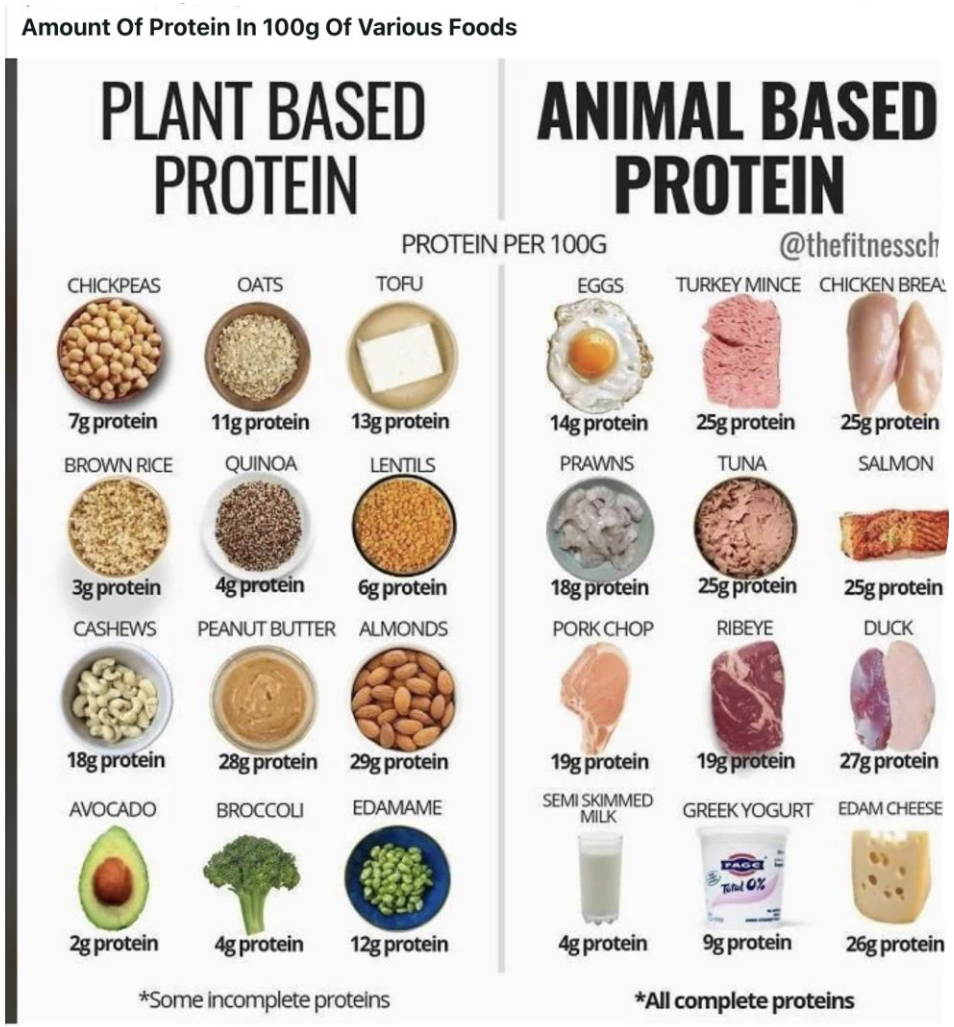
- Poor oral intake
- Malabsorption
- Protein loss into ascites
- Increased energy requirements
- Low glycogen stores – rapid transition to fasting state, muscle breakdown

Should be assessed by a dietician

Sarcopenia and frailty associated with increased hospitalisation, poorer outcomes, poor quality of life, increased mortality

Recommendations - Diet

- 1.5-2.0 g/kg/day protein
- 30-35 kCal/kg/day calories
- Eat every 2-3 hours with carbs
- Bedtime snack
- Dietary supplements if not meeting requirements – high protein, lower sugar and fat (**eg fortisip compact** protein **/renopro)**
- No added salt if ascites/oedema
- Consider short term NG feeing if not able to maintain intake orally
- Treat vitamin D deficiency, electrolyte abnormalities, consider multivitamin supplements



Liver Transplant Referral

Consider in all patients with irreversible decompensated CLD and UKELD ≥49

In ALD consider after 3 months abstinence from alcohol

Contraindications

- Extrahepatic **comorbidity with** predicted mortality >50% at 5years
- Malignancy
- Extrahepatic sepsis
- Severe frailty (consider whether can be improved eg with NG feeding)
- Ongoing alcohol/ repeated non-adherence to abstinance from alcohol

If in doubt, discuss early

Maybe be suitable for alternative treatment eg TIPSS

New transplant tier for patients with ACLF

Palliative/ Supportive care

- Decompensated cirrhosis is associated with a significant physical and psychosocial symptom burden, most pronounced in the final year of life.
- Determining an accurate prognosis in patients with liver disease is challenging
- Uncertain trajectory of the illness characterised by decompensations of disease and subsequent (partial) recovery.
- Now well recognised that there is a place for PC earlier in the disease course.
- Parallel planning ‘hoping for the best but planning for the worst’ useful phrase to use with patients when introducing the concept of PC.
- Can be initiated anywhere (including SDEC/hospital admission).

Palliative/supportive care

Requires multidisciplinary team input

Managing symptoms

Coordinating care – liaising with community palliative care/primary care/social workers/occupational therapy

Advanced planning – surveillance cessation, Emergency Health Care Planning (EHCP), Advanced Decision to

Liver
Original research

Developing a generic business case for an advanced chronic liver disease support service

PDF

PDF + Supplementary Material

Mark Wright [1], Sarah Willmore [1], Sumita Verma [2, 3], Anita Omasta-Martin [4], Humraj Sahota [1], Wendy Prentice [5], Amelia Jane Stockley [6], Fiona Finlay [7], Julia Verne [8], Ben Hudson [9]

Correspondence to Dr Mark Wright, Hepatology, University Hospital Southampton, Southampton SO166YD, UK; mark.wright@uhs.nhs.uk

British Liver Trust 'Thinking Ahead Document'

Advanced care planning checklist

Date of Advanced liver disease MDT discussion:_____

	Date	Signed
Patient and family updated with MDT outcome		
Discussion of patient's prognosis/wishes/preferred place of care		
Stop HCC surveillance (cancel pre-booked scans)		
Emergency healthcare plan completed +/- advanced directive to refuse treatment		
DNACPR completed and given to patient		
Write to GP • Request addition to palliative care register • Include EHCP/DNACPR information		
District nurses +/- Occupational therapists informed		
Referral to community palliative care/hospice at home		
Social prescribers		
Social care referral		

Symptom management		
Ascites		
Optimise diuretic therapy		
Paracentesis – provide details for liver nurse helpline		
Consider LTAD in selected cases		
Varices		
Continue carvedilol if tolerated/systolic BP>90		
Encephalopathy		
Lactulose prescribed		
Rifaximin if encephalopathy on lactulose/lactulose not tolerated		
Other symptoms addressed		
Itch Pain Breathlessness Fatigue Nausea Other		
Referred to specialist palliative care services (if complex symptom control)		

Shifting the paradigm

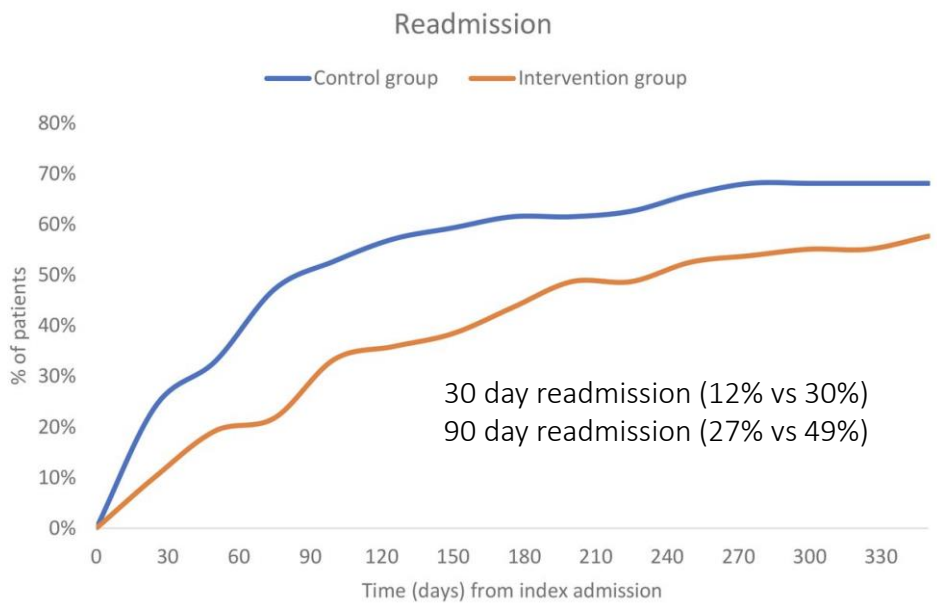
- Currently 70% patients die in hospital, over 50% 30-day readmission rate for decompensated cirrhosis
- Patient led outpatient monitoring
- Focus on admission avoidance
- A holistic, multidisciplinary approach
- Informing, equipping and preparing patients and carers
- Closer working with community/primary care

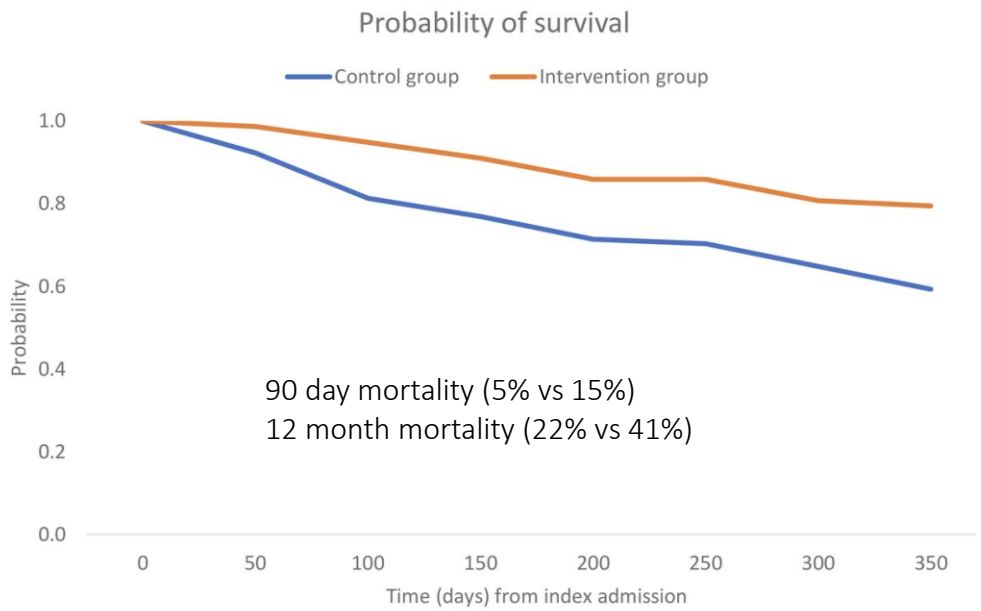
Liver
Original research

Novel, nurse-led early postdischarge clinic is associated with fewer readmissions and lower mortality following hospitalisation with decompensated cirrhosis

Benjamin Giles , Kirsty Fancey , Karen Gamble , Zeshan Riaz , Joanna K Dowman , Andrew J Fowell , Richard J Aspinall
Correspondence to Dr Richard J Aspinall, Gastroenterology & Hepatology, Portsmouth Hospitals University NHS Trust, Portsmouth, UK;
r.j.aspinall@doctors.org.uk

- Retrospective study
- 78 patients in the intervention group (early post-discharge clinic, mean of 8 attendances in 12 months) , 91 in standard consultant-led follow-up group
- Hospitalised with decompensated cirrhosis >85% ALD,
- Followed up for 12 months





Conclusion

- Think creatively about how we manage increased demand
- Use of care bundles/more diverse workforce/technology/novel pathways of care to manage compensated disease.
- Make every encounter count- promote self-management
- Decompensated disease - focus on promoting recompensation and reducing hospital admissions
  - Regular holistic review by a multidisciplinary team
  - Close collaboration with community teams
  - Early discussion or referral with transplant unit if appropriate
  - Good palliative care and careful advanced planning to prepare patients and carers if deterioration
- Large multi-centre trials will help determine best practice in future
- Disseminate and share best practice

With thanks to my co-authors

Steven Masson, Debbie L Shawcross, Andrew C Douds, Emily Bonner, Lynsey Corless, Joanna A Leithead, John Hammond, Michael A Heneghan, Mussarat Nazia Rahim, Dhiraj Tripathi, Rebecca West1, Jill Johnson, Gemma Botterill, Coral Hollywood, Valerie Ross, Mhairi Donnelly, Juliet E Compston, Stuart McPherson, Allison Grapes

The BSG liver section

BASL/BSG portal hypertension SIG

British Liver Trust