H.1 Risk factors and risk assessment tools

H.1.1 Risk factors

Reference	ASKGAARD 2015[9]
Study type and analysis	Prospective. Multivariate analyses (Cox proportional hazards model).
Number of participants and characteristics	**Total n=55,917** **Men n=27,178** Lifetime abstainers 63 Current abstainers 350 <1 drinking days/week 2,946 1 drinking days/week 2,401 2–4 drinking days/week 9,165 5–6 drinking days/week 4,495 7 drinking days/week 7,276 **Women n=29,875** Lifetime abstainers 265 Current abstainers 370 <1 drinking days/week 7,682 1 drinking days/week 4,345 2–4 drinking days/week 9,481 5–6 drinking days/week 3,147 7 drinking days/week 3,931

Reference	ASKGAARD 2015[9]
	Data were used from a Danish prospective cohort study originally designed to investigate associations between diet and other lifestyle exposures and cancer in middle-aged individuals. From December 1993 to May 1997, 160,725 Danish women and men aged 50 to 64 years were invited to participate in the Diet, Cancer and Health study. Eligible cohort members were born in Denmark and not previously diagnosed with cancer. In all, 27,178 men and 29,875 women participated in the study (response rate 35%). For the present study of drinking pattern and risk of alcoholic cirrhosis, the authors excluded subjects diagnosed with alcoholic cirrhosis before baseline (n=86). Also excluded were subjects with missing information on alcohol amount (n=105), smoking (n=27), education (n=27), and waist circumference (n=50), and participants who reported conflicting answers on alcohol amount and frequency (n=236) or smoking status and tobacco use (n=7). At baseline, participants were asked to recall the average amount per week of specific types of alcohol they consumed when they were 20–29, 30–39, 40–49, and 50–59 years old and the number of drinking days per week over the years.
Prognostic variable(s)	Alcohol use (categorical: lifetime abstainers, current abstainers, and five categories of drinkers with up to 7 drinking days per week): on the basis of questionnaire items about alcohol use at initial examination
Confounders	• age • sex • length of education • waist circumference • smoking
Outcomes and effect sizes	Participants were observed from baseline until diagnosis of alcoholic cirrhosis (n=342), migration (n=337), loss to follow-up (n=2), death from other causes (n=8,132), or 31st December 2011 (end of follow-up), whichever came first. Information on liver cirrhosis was obtained from the National Patient Register and the Danish Register of Causes of Death. The former was established in 1977 and contains data on all somatic hospital admissions and, since 1995, data on outpatient contacts as well. The Danish register of Deaths contains information on all causes of death in Denmark. In both registries, diagnoses are recorded according to the 8th and 10th international classification of diseases (codes for alcoholic cirrhosis, ICD-8: 571.0 and ICD-10: K70.3, and codes for unspecified cirrhosis, ICD-8: 571.9, 456.0, 785.3 and ICD-10: 185.0, 185.9, K74.6, R18.9), and the validity is considered to be high. The data on vital status and migration were obtained from the Danish Civil Registration system. For the hazard ratios of developing alcoholic cirrhosis, the reference group for alcohol use was 2–4 drinking days per week. Multivariate analysis used the Cox proportional hazards model (CI) adjusted for the above mentioned confounders. **Men who received diagnosis of alcoholic cirrhosis n=257**

Reference	ASKGAARD 2015[9]
	Drinking alcohol at baseline:
	Lifetime abstainers n=0; HR N/A
	Current abstainers n=7; HR 10.0 (4.32; 23.0)
	<1 drinking days/week n=14; HR 1.34 (0.67; 2.67)
	1 drinking days/week n=8; HR 1.30 (0.59; 2.87)
	2–4 drinking days/week n=27; HR 1.00 = REFERENCE GROUP
	5–6 drinking days/week n=30; HR 1.43 (0.84; 2.43)
	7 drinking days/week n=171; HR 3.65 (2.39; 5.55)
	Women who received diagnosis of alcoholic cirrhosis n=85
	Drinking alcohol at baseline:
	Lifetime abstainers n=0; HR N/A
	Current abstainers n=2; HR 4.03 (0.91; 17.8)
	<1 drinking days/week n=16; HR 1.45 (0.71; 2.96)
	1 drinking days/week n=5; HR 0.81 (0.29; 2.24)
	2–4 drinking days/week n=15; HR 1.00 = REFERENCE GROUP
	5–6 drinking days/week n=17; HR 2.30 (1.14; 4.67)
	7 drinking days/week n=30; HR 1.73 (0.85; 3.52)

Reference	BECKER 2002[11]
Study type and analysis	Prospective cohort. Multiplicative Poisson regression models, assuming constant intensity within each 10-year interval.
Number of participants and characteristics	Subjects from several cohort studies: Copenhagen County Centre of Preventative Medicine: 1897 (n=234), 1914 (n=924) and 1936 (n=1,105) birth cohorts. World Health Organisation Monitoring of Trends and Determinants in Cardiovascular Diseases (MONICA) I (n=3,769) MONICA II (n=1,396) and MONICA III (n=1,985), the Copenhagen City Heart Study (n=17,960) and the Copenhagen Male Study (n=3,257). Total number of

Reference	BECKER 2002[11]
	participants=30,630. Mean age at first examination was 52 years (range 21–93). Male/female: 16,295/14,335 Total alcohol intake (drinks/week) <1: n=6,119; events at follow up (death or discharge with alcohol-induced cirrhosis):26. Total alcohol intake (drinks/week)1–7: n=11,460; events at follow up (death or discharge with alcohol-induced cirrhosis):35. Total alcohol intake (drinks/week) 8–21: n=8,918; events at follow up (death or discharge with alcohol-induced cirrhosis):75 Total alcohol intake (drinks/week) 22–35: n=2,481; events at follow up (death or discharge with alcohol-induced cirrhosis): 58 Total alcohol intake (drinks/week) >35: n=1,652; events at follow up (death or discharge with alcohol-induced cirrhosis): 98. Individuals abstaining because of drug treatment for an alcohol related problem (n=7) were excluded.
Prognostic variable(s)	1. Alcohol intake: Copenhagen City Heart Study and Copenhagen County Centre of Preventative Medicine asked about their average number of weekly drinks of wine, beer and spirits. Copenhagen Male study asked about their average number of weekly drinks of wine, beer and spirits on week days and weekend days (these were added for consistency with above 2 studies). A Danish standard drink contains 12 g of alcohol. 2. BMI
Confounders	1. Prognostic variable: alcohol intake • age • smoking habits (never, ex-smokers, current 1–14 g/day, current 15–24 g/day and current >24 g/day) • number of years of school education (less than 8 years, 8–11 years, 12 or more years) • BMI (20 or less, 20–25, 25–30, more than 30) • percentage wine of total alcohol intake 2. Prognostic variable: BMI • variables included in the analysis not reported but methods report that significant variables were included in the model. The number of current smokers was higher among those who later developed alcohol-induced liver cirrhosis. No differences in school education were observed. BMI>32 was more prevalent among those who developed cirrhosis than in the total sample.
Outcomes and effect sizes	End points in analysis were death or discharge with alcohol-induced cirrhosis (ICD-8 code 571.09). 292 individuals (80 women and 212 men) developed alcohol-induced cirrhosis, corresponding to an incidence rate of 0.07% per year. Twenty-six individuals who developed alcohol-induced cirrhosis were non-drinkers. Data were analysed by means of multiplicative Poisson regression models, assuming constant intensity within each 10-year age interval. Results given as rate ratios or relative risks. A dose-dependent increase in

Reference	BECKER 2002[11]
	relative risk for developing alcohol-induced cirrhosis with increasing alcohol intake was observed among women, and a J-shaped relationship among men.
	Alcohol results for men:
	Total alcohol intake (drinks/week) <1: RR=7.76 (3.35–18.0)
	Total alcohol intake (drinks/week) 1–7: RR=1 (reference)
	Total alcohol intake (drinks/week) 8–21: RR=2.34 (1.18–4.62)
	Total alcohol intake (drinks/week) 22–35: RR=10.4 (5.4–19.9)
	Total alcohol intake (drinks/week) >35: RR=20.4 (10.8–38.8)
	Alcohol results for women:
	Total alcohol intake (drinks/week) <1: RR=1.32 (0.51–3.38)
	Total alcohol intake (drinks/week)1–7: RR=1.19 (0.54–2.59)
	Total alcohol intake (drinks/week) 8–21: RR=5.33 (2.63–10.8)
	Total alcohol intake (drinks/week) 22–35: RR=10.8 (4.28–27.1)
	Total alcohol intake (drinks/week) >35: RR=14.1 (4.45–44.6)
	BMI results:
	<20: RR=2.2 (1.3–3.9)
	20–24: RR=1 (reference)
	>30: RR=2.2 (1.5–3.4)

Reference	BLACKWELDER 1980[12]
Study type and analysis	Prospective retrospective cohort
Number of participants and characteristics	n=8,008 (analysed as continuous therefore numbers in each risk factor category not reported)
Honolulu Heart Study is a prospective study of coronary heart disease and stroke among men of Japanese descent in Hawaii, born between 1900 and 1919 and residing on the island of Oahu in 1965. Subsequent deaths among men in the cohort were identified through surveillance of death

Reference	BLACKWELDER 1980[12]
	certificates and obituary columns. Based on the Eighth Revision of the International Classification of Diseases, an underlying cause, independent of the one appearing on the death certificate, was assigned to most deaths at a conference of heart study physicians: all available evidence, including heart study examination findings and autopsy information, was considered in assigning this cause. Follow-up 8 years
Prognostic variable(s)	Alcohol consumption: usual intake was estimated from answers to questions on usual consumption of beer, wine, and liquor (ml per day of ethanol). A second source of information collected was a 24-hour dietary recall interview.
Confounders	• age • cigarettes smoked per day • systolic blood pressure • serum cholesterol • relative weight
Outcomes and effect sizes	Event: death due to cirrhosis 16 deaths due to cirrhosis. Level of usual alcohol intake (ml/day) 0 6 events 1–10 1 event 11–30 2 events 31+ 7 events Standardised coefficient from multivariate analysis of the association of alcohol intake with death from cirrhosis of the liver: 0.341 (t=3.11, estimated coefficient divided by its standard-error, p<0.01)

Reference	FUCHS 1995[49]
Study type and analysis	Prospective cohort. Proportional-hazards model to adjust for multiple risk factors simultaneously.
Number of participants	n=85,709 Average alcohol intake (g/day) 0: n=25,535; events at follow-up (death due to cirrhosis of the liver): 12.

Reference	FUCHS 1995[49]
and characteristics	Average alcohol intake (g/day) 0.1–1.4: n=11,304; events at follow-up (death due to cirrhosis of the liver): 1 Average alcohol intake (g/day) 1.5–4.9: n=18,406; events at follow-up (death due to cirrhosis of the liver): 5 Average alcohol intake (g/day) 5.0–14.9: n=17,783; events at follow-up (death due to cirrhosis of the liver): 10 Average alcohol intake (g/day) 15.0–29.9: n=8106; events at follow-up (death due to cirrhosis of the liver): 9 Average alcohol intake (g/day) ≥30: n=4521; events at follow-up (death due to cirrhosis of the liver): 15 The Nurses' Health Study. 85,709 women, 34 to 59 years of age and without a history of myocardial infarction, angina, stroke, or cancer, who completed a dietary questionnaire in 1980. Because the group of women who now abstain from alcohol may include former heavy drinkers and women who stopped drinking because of illness, we excluded from our primary analysis 2957 women who reported no alcohol intake in 1980 but had greatly decreased their alcohol intake in the previous 10 years. 12 year follow-up period
Prognostic variable(s)	Alcohol consumption: asked to report their average frequency of consumption of specified foods and beverages during the previous 12 months, on three occasions. Questions about the consumption of beer, wine, and spirits were included as separate items. Total alcohol intake was the sum of the values for all three beverages; a 12 oz (360 ml) can or bottle of beer was assumed to contain 13.2 g of alcohol, a 4 oz (120 ml) glass of wine 10.8 g, and a standard drink of spirits 15.1 g.
Confounders	• age (in five-year categories) • smoking status (participants were grouped into those who never smoked, those who had formerly smoked, and those who smoked less than 15, 15 to 24, and more than 24 cigarettes per day) • body-mass index (in quintiles) • regular aspirin use (≥2 days per week) • regular vigorous exercise (≥1 day per week) • high plasma cholesterol level (yes or no) • diabetes (yes or no) • hypertension (yes or no) • myocardial infarction in a parent at 60 years of age (yes or no) • past or present oral-contraceptive use (yes or no) • menopausal status • past or present postmenopausal hormone use (yes or no)

Reference	FUCHS 1995[49]
	• energy-adjusted intake of dietary fibre and saturated fat (in quintiles). For each woman, person-years of follow-up were counted from the date of return of the 1980 questionnaire to 31 May 1992 or, for those who died, until the date of death. Because the focus was on mortality, and because people tend to reduce alcohol consumption markedly or to discontinue consumption after a major illness is diagnosed, levels of alcohol intake reported after 1980 were not taken into consideration in the primary analysis. For all other covariates, person-years of follow-up were assigned according to the risk-factor status reported on the most recently completed questionnaire.
Outcomes and effect sizes	Endpoint: death due to cirrhosis of the liver (made systematic searches of the vital records of the states and the National Death Index to discover deaths among women who did not respond during each questionnaire cycle. A physician, blinded to data on alcohol consumption and other risk factors, reviewed death certificates and medical records to classify the cause of death according to the International Classification of Diseases, Eighth Revision ICD-8). Total 52 deaths from cirrhosis of the liver. Average alcohol intake (g/day): relative risk from multivariate analysis. Primary analysis used incidence rates with person-years of follow-up as the denominators. Calculated relative risk as the incidence of death among women with a given alcohol intake divided by the corresponding rate among women who did not consume alcohol. Used proportional hazards model to adjust for multiple risk factors simultaneously. 0 1.0 0.1–1.4 0.21 (0.027–1.59) 1.5–4.9 0.69 (0.24–1.98) 5.0–14.9 1.27 (0.54–3.01) 15.0–29.9 1.86 (0.76–4.59) ≥30 2.55 (1.06–6.11)

Reference	IOANNOU 2003[62]
Study type and analysis	Prospective cohort.
Number of participants and characteristics	Baseline data were collected from 1971–1974 as part of the first National Health and Nutrition Examination Survey (NHANES I) and included interviews, physical examinations, and laboratory investigations on 14,407 participants aged 25–74 years in the United States. The NHANES I participants were subsequently followed up in 1982–1984, 1986, 1987, and finally in 1992 as part of the NHANES Epidemiologic Follow-up Study

Reference	IOANNOU 2003[62]
	(NHEFS).
	Excluded participants who might have already had chronic liver disease or cirrhosis at the time of entry into the study (1227 participants who reported a history of jaundice; were found to have hepatomegaly or splenomegaly on physical examination; or had a serum albumin level less than 3 g/dl).
	Excluded 565 participants who either died or had a diagnosis of liver cirrhosis in their hospitalization records within the first 5 years after entry into the study (to reduce the possible effects of subclinical liver disease on BMI and fat distribution). Excluded 604 participants with missing information for any one of the variables (BMI, age, alcohol consumption, sex, race, educational attainment, household income, and geographic location in the United States).
	Final analysis n=11,465. Male/female: 4439/7026.
	Mean follow-up time of 12.9 years
	Normal weight: n=5752; overweight: n=3774; obese: n=1939
Prognostic variable(s)	BMI: calculated at entry into the study. BMI categorized participants into normal-weight (BMI <25 kg/m^2), overweight (BMI 25 to <30 kg/m^2), and obese categories (BMI ≥30 kg/m^2)
Confounders	• age (modelled as a continuous variable)
	• alcohol consumption over the previous 12 months (modelled as a dummy variable with categories: none [which included consuming alcohol <2–3 times per year], >0 to 1 drink/day, >1 to 2 drinks/day, and >2 drinks/day
	• sex
	• race (Caucasian, non-Caucasian)
	• education (high school graduate or not)
	• household income (modelled as a continuous-categoric variable in $1000 intervals)
	• geographic location in the United States (modelled as a dummy variable with categories: Northeast, Midwest, South, and West).
	Models with and without adjusting for serum cholesterol level or the presence of self-reported diabetes mellitus were used to investigate whether obesity is associated with cirrhosis over and above any effect that is mediated through diabetes mellitus and hypercholesterolemia, which are risk factors for non-alcoholic steatohepatitis.
Outcomes and	Death or hospitalisation caused by cirrhosis.

Reference	IOANNOU 2003[62]
effect sizes	Specially trained NHANES I Epidemiologic Follow-up Study personnel used all available hospital records to assign the principal diagnosis as "the condition established after study to be chiefly responsible for occasioning the admission of the patient to the health care facility." Causes of death were abstracted from the death certificates. Death or hospitalization caused by cirrhosis was defined by one of the following International Classification of Diseases, Ninth Revision diagnoses, recorded either on the death certificate or as the principal diagnosis of hospitalization: 571.2 (alcohol induced cirrhosis), 571.5 (cirrhosis without mention of alcohol), 571.6 (biliary cirrhosis), 456.0 (oesophageal varices with bleeding), 456.1 (oesophageal varices, no mention of bleeding), 572.2 (hepatic coma), 572.3 (portal hypertension), 572.4 (hepatorenal syndrome), and 155.0 (primary liver cancer).

The Cox proportional-hazards model was used to determine the hazard ratio comparing obese or overweight persons with normal-weight persons with respect to the risk for cirrhosis-related death or hospitalization, after adjusting for confounders. The date 5 years after the measurement of the BMI was used as time 0 in the model because the analysis was restricted to participants who remained alive and without a diagnosis of cirrhosis for at least 5 years after entry into the study.

Adjusting for diabetes:

Obese versus normal weight: adjusted hazard ratio 1.65 (95% CI 0.9–3.1)

Overweight versus normal weight: adjusted hazard ratio 1.08 (95% CI 0.6–1.9)

Not adjusting for diabetes:

Obese versus normal weight: adjusted hazard ratio 1.69 (95% CI 1.0–3.0)

Overweight versus normal weight: adjusted hazard ratio 1.16 (95% CI 0.7–1.9)

The associations between BMI category and cirrhosis-related death or hospitalization were not appreciably different between men and women, between Caucasians and non-Caucasians, or between persons with serum iron saturation above or below 45% (data not shown).

	Reported alcohol consumption		
BMI category (adjusted HRs)	**None**	**Up to 0.3 drinks/day**	**>0.3 drinks/day**
Overweight (versus normal)	1.93 (0.7–5.3)	1.31 (0.4–4.2)	0.97 (0.5–1.8)
Obese (versus normal)	4.10 (1.4–11.4)	2.48 (0.7–8.4)	0.80 (0.3–2.1)

Adjusting for serum cholesterol level had almost no effect on the association between BMI category and death or hospitalization owing to cirrhosis. There was little difference in the rates of death or hospitalization caused by cirrhosis by geographic region, diabetes mellitus status, or

Reference	IOANNOU 2003[62]
	serum cholesterol level.

Reference	KLATSKY 1992[71]
Study type and analysis	Prospective. Multivariate analyses (Cox proportional hazards model).
Number of participants and characteristics	n=128,934 Never 15,498 Past drinker 4,194 <1 drink/month 27,417 >1/month, <1/day 47,895 1–2/day 23,408 3–5/day 8,518 26/day 2,004 128,934 persons who underwent health examinations at the Oakland and San Francisco facilities of the Kaiser Permanente Medical Care Program, a prepaid health plan, from January 1978 to December 1985. The study population comprised 79.8% of all persons who underwent the health examination during the years of data collection. The remaining 20.2% included persons who were examined during absences of the research clerk, persons who declined, and those who failed to supply required inclusion data.
Prognostic variable(s)	Alcohol use (categorical: never-drinkers, ex-drinkers, and five categories of drinkers up to six drinks per day or more): on the basis of questionnaire items about alcohol use at initial examination.
Confounders	• age • sex • race • education • BMI • marital status • upper gastrointestinal history • smoking • coffee and tea consumption

Reference	KLATSKY 1992[71]
Outcomes and effect sizes	Hospitalisation or death due to cirrhosis. Hospitalisations at Northern California Kaiser Permanente facilities were ascertained through December 1988 or until subjects left the health plan. Hospitalisation for cirrhosis was detected by computer search for a primary discharge diagnosis of International Classification of Diseases, Adapted, Eighth Revision (ICDA-8), code 571. Primary death certificate diagnoses of cirrhosis were classified by ICD-9 codes as alcoholic (ICD-9 codes 571.0-571.3) or as non-alcoholic (ICD-9 codes 571.4-571.9). For non-alcoholic cirrhosis, the reference group for alcohol use was lifelong non-drinkers. For alcoholic cirrhosis, there were too few non-drinkers to use this category as the reference, so the reference group for alcohol use also included persons who reported current consumption of less than one drink per day. Multivariate analysis used the Cox proportional hazards model. Outcome was described as 'relative risk'. Hospitalisation for alcoholic cirrhosis n=59 Drinks/day Reference: RR 1.0 Ex-drinkers: RR 5.4 1–2: RR 7.7 3–5: RR 18.2 ≥6: RR 33.1 Hospitalisation for non-alcoholic cirrhosis n=30 Drinks/day Reference: RR 1.0 Ex-drinkers: RR 1.2 1–2: RR 0.8 3–5: RR (analysis not performed because of the small number of cases) ≥6: RR 0.8 Death from alcoholic cirrhosis n=40 Drinks/day Reference: RR 1.0 Ex-drinkers: RR 17.1 1–2: RR 7.8

Reference	KLATSKY 1992[71]
	3–5: RR 21.6 ≥6: RR 83.4 Death from non-alcoholic cirrhosis n=32 Drinks/day Reference: RR 1.0 Ex-drinkers: RR 16.3 1–2: RR 7.0 3–5: RR 6.4 ≥6: RR 23.6

Reference	LIU 2010A[78]
Study type and analysis	Prospective cohort (Million Women study). Cox regression models.

Number of participants and characteristics	Total n=1,230,662 Events=1811 (first cirrhosis-related hospital admission or death)
	BMI <22.5 n=237,619 414
	  22.5 to <25 n=331,480 402
	  25 to <27.5 n=266,795 343
	  27.5 to <30 n=173,498 236
	  30 to <35 n=156,733 283
	  ≥35 n=64,537 133
	
	Participants were excluded if they reported having had any type of liver disease or had a diagnosis of cancer (except non-melanomatous skin cancer) before recruitment or if their BMI was unknown. Mean age at recruitment was 56 years. Mean BMI was 27.6. 77% reported drinking alcohol and among these the mean reported alcohol consumption was 54 g/week.
	
	Women were recruited through NHS breast screening centres in England and Scotland 1996–2001.

Prognostic variable(s)	BMI

Reference	LIU 2010A[78]
Confounders	Data adjusted for: • age • region of recruitment (10 regions) • socioeconomic status (in fifths according to the deprivation index, a score based on residential address that takes into account employment, household overcrowding, home and care ownership) • alcohol consumption (none [never or past], consumption of <30, 30 to <70, 70 to <150, and >150 g/week) • smoking (never, past, current 1–9 cigarettes per day, current 10–19 cigarettes per day, and ≥20 cigarettes per day) • strenuous physical activity (once a week or less, more than once a week). The proportion of women in the upper socioeconomic group decreased with increasing BMI. The proportion of women reporting drinking any alcohol and the amount they drank decreased with increasing BMI. The proportion of women who were current smokers and the proportion who reported doing strenuous physical activity more than once per week also decreased with increasing BMI. The proportion who reported being treated for diabetes also increased with increasing BMI.

Outcomes and effect sizes	Outcome: hospital admission with cirrhosis or death from cirrhosis (women were classified as having a hospital admission with liver cirrhosis or death from liver cirrhosis if during follow up they had a hospital record or death registration with an ICD10 code of K70, K73 or K74).
	
	Average length of follow up: 6.2 years. Used Cox regression models to analyse data. Outcome described as 'relative risk'
	
	BMI category <22.5 RR=1.36 (1.23–1.5)
	                 22.5 to <25 RR=1.00 (0.91–1.10)
	                25 to <27.5 RR=1.05 (0.94–1.17)
	                27.5 to <30 RR=1.11 (0.97–1.26)
	                30 to <35 RR=1.49(1.33–1.68)
	                ≥35 RR=1.77(1.49–2.10)
	
	Among the women with a BMI of 22.5 and above (women with a BMI below 22.5 excluded from this analysis as could not exclude the possibility that previous illness contributed to weight loss):
	Per 5 unit increase in BMI: RR 1.28 (1.119–1.38) (that is, the estimated increase in the risk of cirrhosis was 28% (95% CI 195 to 38%) for every 5 unit increase in BMI).

Reference	LIU 2010A[78]					
	Reported alcohol consumption					
	BMI category	**<70g/week**	**70 to <150 g/week**	**≥150 g/week**	**No diabetes**	**Diabetes**
	22.5 to <25	1.00 (0.85–1.17)(reference)	1.59 (1.31–1.92)	3.44 (2.7–4.37)	1.00 (0.9–1.11)(reference)	4.29 (2.74–6.73)
	25 to <30	0.96 (0.84–1.1)	1.83 (1.56–2.16)	3.82 (3.09–4.72)	1.05 (0.96–1.15)	4.37 (3.3–5.78)
	≥30	1.35 (1.15–1.59)	2.31 (1.81–2.94)	6.53 (4.98–8.55)	1.38 (1.24–1.54)	5.94 (4.83–7.31)
	Above data are relative risks (95% floated confidence interval) adjusted for age, region, socioeconomic status, physical activity and alcohol and smoking as appropriate.					

Reference	SCHULT 2011[126]
Study type and analysis	Prospective cohort. Logistic regression.
Number of participants and characteristics	792 subjects from a longitudinal cohort study conducted in Gothenburg, during a 40-year study period. In 1963 all men born in 1913 on those days which were even multiples of 3 and still alive at the age of 50 were invited to participate in a longitudinal population study. None of the participants had cirrhosis at inclusion. Cirrhosis was classified as patients with a diagnosis of 571,00-99, 571A-X and K70.2-3, K71.7, K74.0-6 on The Swedish Hospital Discharge Register based on compulsory reports on diagnoses for all hospitalised patients in Sweden (using the Swedish version of the International Classification of Diseases).
Prognostic variable(s)	1. Alcohol abuse I (individuals who have sought help for alcohol addiction, been arrested for drunkenness or had been provided with institutional care by social authorities) 2. Alcohol abuse II (self-reported as having alcohol problems and/or daily alcohol consumption). 3. BMI
Confounders	BMI, triglycerides, two definitions of alcohol abuse
Outcomes and effect sizes	Endpoint: patients who were hospitalised and/or died with a diagnosis of liver cirrhosis. 14 patients developed cirrhosis (established histopathologically in 11 and 3 had typical radiological findings with clinical complications). 'Model 1' results (Alcohol abuse 1 definition):

Reference	SCHULT 2011[126]
	BMI OR 1.27 (1.09–1.48) Alcohol abuse 0.71 (0.17–2.92) 'Model 2' results (alcohol abuse 2 definition) BMI OR 1.26 (1.08–1.47) Alcohol abuse OR 1.55 (0.36–6.78)

H.1.2   Risk tools

No relevant clinical studies were identified.