

Statement of Principles
concerning

CIRRHOSIS OF THE LIVER

No. 107 of 2007

for the purposes of the

Veterans' Entitlements Act 1986
and

Military Rehabilitation and Compensation Act 2004

Title

1. This Instrument may be cited as Statement of Principles concerning cirrhosis of the liver No. 107 of 2007.

Determination

2. The Repatriation Medical Authority under subsection **196B(2)** and **(8)** of the *Veterans' Entitlements Act 1986* (the VEA):
 - (a) revokes Instrument No. 35 of 1998 concerning cirrhosis of the liver; and
 - (b) determines in its place this Statement of Principles.

Kind of injury, disease or death

3.
 - (a) This Statement of Principles is about **cirrhosis of the liver** and **death from cirrhosis of the liver**.
 - (b) For the purposes of this Statement of Principles, "**cirrhosis of the liver**" means an irreversible chronic condition of the hepatic parenchyma involving severe fibrosis in association with the formation of regenerative nodules.
 - (c) Cirrhosis of the liver attracts ICD-10-AM code K70.3, K71.7, or K74.3-K74.6.

- (d) In the application of this Statement of Principles, the definition of "**cirrhosis of the liver**" is that given at paragraph 3(b) above.

Basis for determining the factors

4. The Repatriation Medical Authority is of the view that there is sound medical-scientific evidence that indicates that **cirrhosis of the liver** and **death from cirrhosis of the liver** can be related to relevant service rendered by veterans, members of Peacekeeping Forces, or members of the Forces under the VEA, or members under the *Military Rehabilitation and Compensation Act 2004* (the MRCA).

Factors that must be related to service

5. Subject to clause 7, at least one of the factors set out in clause 6 must be related to the relevant service rendered by the person.

Factors

6. The factor that must as a minimum exist before it can be said that a reasonable hypothesis has been raised connecting **cirrhosis of the liver** or **death from cirrhosis of the liver** with the circumstances of a person's relevant service is:
- (a) for males, consuming at least 110 kilograms of alcohol within any 10 year period before the clinical onset of cirrhosis of the liver; or
 - (b) for females, consuming at least 55 kilograms of alcohol within any 10 year period before the clinical onset of cirrhosis of the liver; or
 - (c) having chronic infection with the hepatitis B virus before the clinical onset of cirrhosis of the liver; or
 - (d) having chronic infection with the hepatitis C virus before the clinical onset of cirrhosis of the liver; or
 - (e) having chronic infection with the hepatitis D virus before the clinical onset of cirrhosis of the liver; or
 - (f) being infected with human immunodeficiency virus (HIV), in the presence of chronic infection with the hepatitis B virus or chronic infection with the hepatitis C virus, before the clinical onset of cirrhosis of the liver; or

- (g) having steatohepatitis before the clinical onset of cirrhosis of the liver; or
- (h) having chronic hepatitis before the clinical onset of cirrhosis of the liver; or
- (i) having severe right-sided cardiac failure for a continuous period of at least six months, within the five years before the clinical onset of cirrhosis of the liver; or
- (j) having received a cumulative equivalent dose of at least 0.4 Sievert of atomic radiation to the liver, before the clinical onset of cirrhosis of the liver;
- (k) having received a cumulative dose of at least 0.4 Sievert of ionising radiation to the liver, from internal deposition of a substance which emits alpha particles, before the clinical onset of cirrhosis of the liver; or
- (l) having received thorium dioxide (Thorotrast) before the clinical onset of cirrhosis of the liver; or
- (m) consuming a daily average of at least 15 milligrams of vitamin A for a period of at least 18 months, or a cumulative dose of at least eight grams, within the ten years before the clinical onset of cirrhosis of the liver; or
- (n) being treated with methotrexate:
 - (i) for at least the six months; or
 - (ii) to a cumulative dose of methotrexate of at least 500 milligrams taken over at least a three month period, before the clinical onset of cirrhosis of the liver; or
- (o) inhaling or having cutaneous contact with carbon tetrachloride for a cumulative period of at least 500 hours within the five years before the clinical onset of cirrhosis of the liver; or
- (p) inhaling a cumulative dose of at least 500 ppm-years of gaseous vinyl chloride before the clinical onset of cirrhosis of the liver; or
- (q) inhaling gaseous vinyl chloride for a cumulative period of at least 1000 hours while working in the production or processing of vinyl chloride monomer or polyvinyl chloride before the clinical onset of cirrhosis of the liver; or

- (r) having schistosomiasis involving the liver for at least five years before the clinical onset of cirrhosis of the liver; or
- (s) having a chronic partial or complete blockage to the passage of bile from the intrahepatic biliary system to the duodenum at the time of the clinical onset of cirrhosis of the liver; or
- (t) having iron overload involving the liver at the time of the clinical onset of cirrhosis of the liver; or
- (u) having autoimmune chronic active hepatitis before the clinical onset of cirrhosis of the liver; or
- (v) having alpha-1 antitrypsin deficiency before the clinical onset of cirrhosis of the liver; or
- (w) having Gaucher's disease before the clinical onset of cirrhosis of the liver; or
- (x) having Wilson's disease before the clinical onset of cirrhosis of the liver; or
- (y) having Budd-Chiari syndrome for a continuous period of at least six months, within the five years before the clinical onset of cirrhosis of the liver; or
- (z) having veno-occlusive disease for a continuous period of at least six months, within the five years before the clinical onset of cirrhosis of the liver; or
- (aa) for males, consuming at least 110 kilograms of alcohol within any 10 year period before the clinical worsening of cirrhosis of the liver; or
- (bb) for females, consuming at least 55 kilograms of alcohol within any 10 year period before the clinical worsening of cirrhosis of the liver; or
- (cc) having chronic infection with the hepatitis B virus before the clinical worsening of cirrhosis of the liver; or
- (dd) having chronic infection with the hepatitis C virus before the clinical worsening of cirrhosis of the liver; or

- (ee) having chronic infection with the hepatitis D virus before the clinical worsening of cirrhosis of the liver; or
- (ff) being infected with human immunodeficiency virus (HIV), in the presence of chronic infection with the hepatitis B virus or chronic infection with the hepatitis C virus, before the clinical worsening of cirrhosis of the liver; or
- (gg) having steatohepatitis before the clinical worsening of cirrhosis of the liver; or
- (hh) having chronic hepatitis before the clinical worsening of cirrhosis of the liver; or
- (ii) having severe right-sided cardiac failure for a continuous period of at least six months, within the five years before the clinical worsening of cirrhosis of the liver; or
- (jj) having received a cumulative equivalent dose of at least 0.4 Sievert of atomic radiation to the liver, before the clinical worsening of cirrhosis of the liver;
- (kk) having received a cumulative dose of at least 0.4 Sievert of ionising radiation to the liver, from internal deposition of a substance which emits alpha particles, before the clinical worsening of cirrhosis of the liver; or
- (ll) having received thorium dioxide (Thorotrast) before the clinical worsening of cirrhosis of the liver; or
- (mm) consuming a daily average of at least 15 milligrams of vitamin A for a period of at least 18 months, or a cumulative dose of at least eight grams, within the ten years before the clinical worsening of cirrhosis of the liver; or
- (nn) being treated with methotrexate:
 - (i) for at least the six months; or
 - (ii) to a cumulative dose of methotrexate of at least 500 milligrams taken over at least a three month period, before the clinical worsening of cirrhosis of the liver; or
- (oo) inhaling or having cutaneous contact with carbon tetrachloride for a cumulative period of at least 500 hours within the five years before the clinical worsening of cirrhosis of the liver; or

- (pp) inhaling a cumulative dose of at least 500 ppm-years of gaseous vinyl chloride before the clinical worsening of cirrhosis of the liver; or
- (qq) inhaling gaseous vinyl chloride for a cumulative period of at least 1000 hours while working in the production or processing of vinyl chloride monomer or polyvinyl chloride before the clinical worsening of cirrhosis of the liver; or
- (rr) having schistosomiasis involving the liver for at least five years before the clinical worsening of cirrhosis of the liver; or
- (ss) having a chronic partial or complete blockage to the passage of bile from the intrahepatic biliary system to the duodenum at the time of the clinical worsening of cirrhosis of the liver; or
- (tt) having iron overload involving the liver at the time of the clinical worsening of cirrhosis of the liver; or
- (uu) having autoimmune chronic active hepatitis before the clinical worsening of cirrhosis of the liver; or
- (vv) having alpha-1 antitrypsin deficiency before the clinical worsening of cirrhosis of the liver; or
- (ww) having Gaucher's disease before the clinical worsening of cirrhosis of the liver; or
- (xx) having Wilson's disease before the clinical worsening of cirrhosis of the liver; or
- (yy) having Budd-Chiari syndrome for a continuous period of at least six months, within the five years before the clinical worsening of cirrhosis of the liver; or
- (zz) having veno-occlusive disease for a continuous period of at least six months, within the five years before the clinical worsening of cirrhosis of the liver; or
- (aaa) inability to obtain appropriate clinical management for cirrhosis of the liver.

Factors that apply only to material contribution or aggravation

7. Paragraphs **6(aa) to 6(aaa)** apply only to material contribution to, or aggravation of, cirrhosis of the liver where the person's cirrhosis of the

liver was suffered or contracted before or during (but not arising out of) the person's relevant service.

Inclusion of Statements of Principles

8. In this Statement of Principles if a relevant factor applies and that factor includes an injury or disease in respect of which there is a Statement of Principles then the factors in that last mentioned Statement of Principles apply in accordance with the terms of that Statement of Principles as in force from time to time.

Other definitions

9. For the purposes of this Statement of Principles:

"alcohol" is measured by the alcohol consumption calculations utilising the Australian Standard of 10 grams of alcohol per standard alcoholic drink;

"atomic radiation" means ionising radiation excluding:

- (a) natural background radiation;
- (b) therapeutic radiation; and
- (c) radiation from diagnostic procedures;

"autoimmune chronic active hepatitis" means a chronic disorder of autoimmunity characterised by continuing hepatocellular necrosis and inflammation and seroimmunologic abnormalities;

"Budd-Chiari syndrome" means symptomatic obstruction or occlusion of the hepatic veins or hepatic portion of the inferior vena cava, characterised by hepatomegaly, abdominal pain and tenderness, ascites, mild jaundice, and eventually, portal hypertension and liver failure;

"chronic hepatitis" means symptomatic, biochemical or infectious agent biomarker evidence of continuing or relapsing hepatic disease for at least six months, with hepatocellular necrosis and inflammation;

"chronic infection with the hepatitis B virus" means:

- (a) the presence of HBsAg or hepatitis B virus (HBV) deoxyribonucleic acid (DNA), in the absence of IgM Anti-HBc on serological testing; or
- (b) positive serology for hepatitis B plus evidence of chronic hepatitis or other chronic changes on liver biopsy;

"chronic infection with the hepatitis C virus " means:

- (a) positive polymerase chain reaction testing for hepatitis C virus (HCV) ribonucleic acid (RNA),
- (b) the presence of anti-HCV and elevated serum aminotransferase levels, more than six months after evidence of an acute hepatitis C infection; or
- (c) positive serology for hepatitis C plus evidence of chronic hepatitis or other chronic changes on liver biopsy;

"chronic infection with the hepatitis D virus" means the presence of IgG anti-HDV on serological testing or the presence of hepatitis D virus on liver biopsy,

"cumulative equivalent dose" means the total equivalent dose of radiation from all types of ionising radiation. It accounts for the differences in biological effectiveness of various types of radiation and allows doses from different radiations to be combined. Each component is calculated by multiplying the absorbed dose in a particular tissue or organ for a given type of radiation by the radiation weighting factor for that radiation. The unit of equivalent dose is the Sievert;

"death from cirrhosis of the liver" in relation to a person includes death from a terminal event or condition that was contributed to by the person's cirrhosis of the liver;

"ICD-10-AM code" means a number assigned to a particular kind of injury or disease in The International Statistical Classification of Diseases and Related Health Problems, 10th revision, Australian Modification (ICD-10-AM), Fifth Edition, effective date of 1 July 2006, copyrighted by the National Centre for Classification in Health, Sydney, NSW, and having ISBN 1 86487 772 3;

"iron overload" means an accumulation of excess iron in tissues and organs which has been confirmed by elevated ferritin or transferrin saturation levels. Causes include haemochromatosis and blood transfusions;

"ppm-years" means parts per million multiplied by years of exposure;

"relevant service" means:

- (a) operational service under the VEA;
- (b) peacekeeping service under the VEA;
- (c) hazardous service under the VEA;
- (d) warlike service under the MRCA; or
- (e) non-warlike service under the MRCA;

"severe right-sided cardiac failure" means a reduced ability of the right ventricle to process venous return, evidenced by marked venous and liver congestion and extensive peripheral oedema;

"terminal event" means the proximate or ultimate cause of death and includes:

- (a) pneumonia;
- (b) respiratory failure;
- (c) cardiac arrest;
- (d) circulatory failure; or
- (e) cessation of brain function;

"veno-occlusive disease" means symptomatic occlusion of the sublobular branches of the hepatic veins or the small hepatic venules.

Application

- 10.** This Instrument applies to all matters to which section 120A of the VEA or section 338 of the MRCA applies.

Date of effect

- 11.** This Instrument takes effect from 14 November 2007.

Dated this *first* day of *November* 2007

The Common Seal of the)
Repatriation Medical Authority)
was affixed to this instrument)
in the presence of:)

KEN DONALD
CHAIRPERSON