



Australian Government
Repatriation Medical Authority

Statement of Principles
concerning
AORTIC STENOSIS
(Balance of Probabilities)
(No. 14 of 2022)

The Repatriation Medical Authority determines the following Statement of Principles under subsection 196B(3) of the *Veterans' Entitlements Act 1986*.

Dated 24 December 2021

The Common Seal of the
Repatriation Medical Authority
was affixed to this instrument
at the direction of:

Professor Terence Campbell AM
Chairperson

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1 Name

This is the Statement of Principles concerning *aortic stenosis (Balance of Probabilities)* (No. 14 of 2022).

2 Commencement

This instrument commences on 31 January 2022.

3 Authority

This instrument is made under subsection 196B(3) of the *Veterans' Entitlements Act 1986*.

4 Repeal

The Statement of Principles concerning aortic stenosis No. 22 of 2013 (Federal Register of Legislation No. F2013L00719) made under subsections 196B(3) and (8) of the VEA is repealed.

5 Application

This instrument applies to a claim to which section 120B of the VEA or section 339 of the *Military Rehabilitation and Compensation Act 2004* applies.

6 Definitions

The terms defined in the Schedule 1 - Dictionary have the meaning given when used in this instrument.

7 Kind of injury, disease or death to which this Statement of Principles relates

- (1) This Statement of Principles is about aortic stenosis and death from aortic stenosis.

Meaning of aortic stenosis

- (2) For the purposes of this Statement of Principles, aortic stenosis:
- (a) means obstruction of the blood flow across the aortic valve due to thickening and calcification of the aortic valve; and
 - (b) excludes:
 - (i) aortic stenosis due to rheumatic heart disease;
 - (ii) congenital stenosis of the aortic valve; and
 - (iii) obstruction to blood flow across the aortic valve due to narrowing of the supra- or subvalvular regions.

Note 1: Symptoms of aortic stenosis typically include shortness of breath or chest pain on exertion, dizziness and fainting (syncope).

Note 2: Aortic stenosis is usually confirmed by echocardiography and demonstration of a significant pressure gradient (a maximum aortic velocity of at least 2 metres/second).

- (3) While aortic stenosis attracts ICD-10-AM code I35.0 or I35.2, in applying this Statement of Principles the meaning of aortic stenosis is that given in subsection (2).
- (4) For subsection (3), a reference to an ICD-10-AM code is a reference to the code assigned to a particular kind of injury or disease in *The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM)*, Tenth Edition, effective date of 1 July 2017, copyrighted by the Independent Hospital Pricing Authority, ISBN 978-1-76007-296-4.

Death from aortic stenosis

- (5) For the purposes of this Statement of Principles, aortic stenosis, in relation to a person, includes death from a terminal event or condition that was contributed to by the person's aortic stenosis.

Note: *terminal event* is defined in the Schedule 1 - Dictionary.

8 Basis for determining the factors

On the sound medical-scientific evidence available, the Repatriation Medical Authority is of the view that it is more probable than not that aortic stenosis and death from aortic stenosis can be related to relevant service rendered by veterans or members of the Forces under the VEA, or members under the MRCA.

Note: *MRCA*, *relevant service* and *VEA* are defined in the Schedule 1 - Dictionary.

9 Factors that must exist

At least one of the following factors must exist before it can be said that, on the balance of probabilities, aortic stenosis or death from aortic stenosis is connected with the circumstances of a person's relevant service:

- (1) having infective endocarditis before the clinical onset of aortic stenosis;
- (2) having a systemic autoimmune connective tissue disease before the clinical onset of aortic stenosis;

Note: Examples of systemic autoimmune connective tissue diseases are systemic lupus erythematosus, rheumatoid arthritis, scleroderma and Sjögren syndrome.
- (3) having chronic kidney disease at the time of the clinical onset of aortic stenosis;

Note: *chronic kidney disease* is defined in the Schedule 1 - Dictionary.
- (4) having hypertension before the clinical onset of aortic stenosis;

- (5) having dyslipidaemia before the clinical onset of aortic stenosis;
Note: *dyslipidaemia* is defined in the Schedule 1 - Dictionary.
- (6) having diabetes mellitus before the clinical onset of aortic stenosis;
- (7) being overweight or obese for at least 5 years within the 20 years before the clinical onset of aortic stenosis;
Note: *being overweight or obese* is defined in the Schedule 1 - Dictionary.
- (8) having smoked tobacco products:
- (a) in amount of at least 15 pack-years before the clinical onset of aortic stenosis; and
 - (b) if smoking has ceased before the clinical onset of aortic stenosis, then that onset occurred within 20 years of cessation;
- Note: *one pack-year* is defined in the Schedule 1 - Dictionary.
- (9) having received a cumulative equivalent dose of at least 1.0 sievert of ionising radiation to the heart before the clinical onset of aortic stenosis;
Note: *cumulative equivalent dose* is defined in the Schedule 1 - Dictionary.
- (10) undergoing a course of therapeutic radiation for cancer, where the heart was in the field of radiation, before the clinical onset of aortic stenosis;
- (11) having infective endocarditis before the clinical worsening of aortic stenosis;
- (12) having a systemic autoimmune connective tissue disease before the clinical worsening of aortic stenosis;
Note: Examples of systemic autoimmune connective tissue diseases are systemic lupus erythematosus, rheumatoid arthritis, scleroderma and Sjögren syndrome.
- (13) having chronic kidney disease at the time of the clinical worsening of aortic stenosis;
Note: *chronic kidney disease* is defined in the Schedule 1 - Dictionary.
- (14) having hypertension before the clinical worsening of aortic stenosis;
- (15) having dyslipidaemia before the clinical worsening of aortic stenosis;
Note: *dyslipidaemia* is defined in the Schedule 1 - Dictionary.
- (16) having diabetes mellitus before the clinical worsening of aortic stenosis;
- (17) being overweight or obese for at least 5 years within the 20 years before the clinical worsening of aortic stenosis;
Note: *being overweight or obese* is defined in the Schedule 1 - Dictionary.

- (18) having smoked tobacco products:
- (a) in amount of at least 15 pack-years before the clinical worsening of aortic stenosis; and
 - (b) if smoking has ceased before the clinical worsening of aortic stenosis, then that worsening occurred within 20 years of cessation;

Note: *one pack-year* is defined in the Schedule 1 - Dictionary.

- (19) having received a cumulative equivalent dose of at least 1.0 sievert of ionising radiation to the heart before the clinical worsening of aortic stenosis;

Note: *cumulative equivalent dose* is defined in the Schedule 1 - Dictionary.

- (20) undergoing a course of therapeutic radiation for cancer, where the heart was in the field of radiation, before the clinical worsening of aortic stenosis;

- (21) being pregnant within the 6 weeks before the clinical worsening of aortic stenosis;

- (22) for symptomatic or severe aortic stenosis only, having surgery requiring a general, spinal or epidural anaesthetic within the 30 days before the clinical worsening of aortic stenosis;

Note: *severe aortic stenosis* is defined in the Schedule 1 - Dictionary.

- (23) inability to obtain appropriate clinical management for aortic stenosis.

10 Relationship to service

- (1) The existence in a person of any factor referred to in section 9, must be related to the relevant service rendered by the person.
- (2) The factors set out in subsections 9(11) to 9(23) apply only to material contribution to, or aggravation of, aortic stenosis where the person's aortic stenosis was suffered or contracted before or during (but did not arise out of) the person's relevant service.

11 Factors referring to an injury or disease covered by another Statement of Principles

In this Statement of Principles:

- (1) if a factor referred to in section 9 applies in relation to a person; and
- (2) that factor refers to an injury or disease in respect of which a Statement of Principles has been determined under subsection 196B(3) of the VEA;

then the factors in that Statement of Principles apply in accordance with the terms of that Statement of Principles as in force from time to time.

Schedule 1 - Dictionary

Note: See Section 6

1 Definitions

In this instrument:

albuminuria means an albumin to creatinine ratio of at least 3 mg/mmol.

aortic stenosis—see subsection 7(2).

being overweight or obese means:

- (a) having a Body Mass Index (BMI) of 25 or greater; or
- (b) for males, having a waist circumference exceeding 94 centimetres; or
- (c) for females, having a waist circumference exceeding 80 centimetres.

Note: **BMI** is also defined in the Schedule 1 - Dictionary.

BMI means W/H^2 where:

- (a) W is the person's weight in kilograms; and
- (b) H is the person's height in metres.

chronic kidney disease means:

- (a) having a glomerular filtration rate of less than 60 mL/min/1.73 m² for at least 3 months; or
- (b) having albuminuria for at least 3 months; or
- (c) having kidney damage, as evidenced by renal biopsy, imaging studies, urinary sediment abnormalities or other markers of abnormal renal function; or
- (d) having had a kidney transplant.

Note: **albuminuria** is also defined in the Schedule 1 - Dictionary.

cumulative equivalent dose means the total dose of ionising radiation received by the particular organ or tissue from external exposure, internal exposure or both, apart from normal background radiation exposure in Australia, calculated in accordance with the methodology set out in *Guide to calculation of 'cumulative equivalent dose' for the purpose of applying ionising radiation factors contained in Statements of Principles determined under Part XIA of the Veterans' Entitlements Act 1986 (Cth)*, Australian Radiation Protection and Nuclear Safety Agency, as in force on 2 August 2017.

Note 1: Examples of circumstances that might lead to exposure to ionising radiation include being present during or subsequent to the testing or use of nuclear weapons, undergoing diagnostic or therapeutic medical procedures involving ionising radiation, and being a member of an aircrew, leading to increased levels of exposure to cosmic radiation.

Note 2: For the purpose of dose reconstruction, dose is calculated as an average over the mass of a specific tissue or organ. If a tissue is exposed to multiple sources of ionising radiation, the various dose estimates for each type of radiation must be combined.

dyslipidaemia means persistently abnormal blood lipid levels, diagnosed by a medical practitioner and evidenced by:

- (a) a serum high density lipoprotein cholesterol level less than 1.0 mmol/L; or
- (b) a serum low density lipoprotein level greater than 4.0 mmol/L; or
- (c) a serum triglyceride level greater than or equal to 2.0 mmol/L; or
- (d) a total serum cholesterol level greater than 5.5 mmol/L; or
- (e) the regular administration of drug therapy to normalise blood lipid levels.

MRCA means the *Military Rehabilitation and Compensation Act 2004*.

one pack-year means the amount of tobacco consumed in smoking 20 cigarettes per day for a period of 1 year, or an equivalent amount of tobacco products.

Note 1: An equivalent amount of tobacco products is 7,300 grams of smoking tobacco by weight, either in cigarettes, pipe tobacco or cigars, or a combination of same. For pipe tobacco, cigars or combinations of multiple tobacco types, 1 gram of tobacco is considered to be equal to one cigarette.

Note 2: Pack-years are calculated by dividing the number of cigarettes smoked per day by 20 and multiplying this number by the number of years the person has smoked. For example, smoking 10 cigarettes per day for 10 years is equal to 5 pack-years, and smoking 40 cigarettes per day for 10 years is equal to 20 pack-years.

relevant service means:

- (a) eligible war service (other than operational service) under the VEA;
- (b) defence service (other than hazardous service and British nuclear test defence service) under the VEA; or
- (c) peacetime service under the MRCA.

Note: **MRCA** and **VEA** are also defined in the Schedule 1 - Dictionary.

severe aortic stenosis means:

- (a) a maximum aortic velocity of at least 4 metres/second; or
- (b) a mean pressure gradient of at least 40 mmHg, or
- (c) an aortic valve area of 1.0 centimetre² or less.

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

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

VEA means the *Veterans' Entitlements Act 1986*.