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EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §3.309, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

§ 3.310 Disabilities that are proximately due to, or aggravated by, service-connected disease or injury.

(a) General. Except as provided in §3.300(c), disability which is proximately due to or the result of a service-connected disease or injury shall be service connected. When service connection is thus established for a secondary condition, the secondary condition shall be considered a part of the original condition.

(b) Aggravation of nonservice-connected disabilities. Any increase in severity of a nonservice-connected disease or injury that is proximately due to or the result of a service-connected disease or injury, and not due to the natural progress of the nonservice-connected disease, will be service connected. However, VA will not concede that a nonservice-connected disease or injury was aggravated by a service-connected disease or injury unless the baseline level of severity of the nonservice-connected disease or injury is established by medical evidence created before the onset of aggravation or by the earliest medical evidence created at any time between the onset of aggravation and the receipt of medical evidence establishing the current level of severity of the nonservice-connected disease or injury. The rating activity will determine the baseline and current levels of severity under the Schedule for Rating Disabilities (38 CFR part 4) and determine the extent of aggravation by deducting the baseline level of severity, as well as any increase in severity due to the natural progress of the disease, from the current level.

(Authority: 38 U.S.C. 1110 and 1131)

(c) Cardiovascular disease. Ischemic heart disease or other cardiovascular disease developing in a veteran who has a service-connected amputation of one lower extremity at or above the knee or service-connected amputations of both lower extremities at or above the ankles, shall be held to be the proxi-

mate result of the service-connected amputation or amputations.

(Authority: 38 U.S.C. 501, 1110-1131)

[44 FR 50340, Aug. 28, 1979, as amended at 66 FR 18198, Apr. 6, 2001; 71 FR 52747, Sept. 7, 2006]

§ 3.311 Claims based on exposure to ionizing radiation.

(a) Determinations of exposure and dose—(1) Dose assessment. In all claims in which it is established that a radiogenic disease first became manifest after service and was not manifest to a compensable degree within any applicable presumptive period as specified in §3.307 or §3.309, and it is contended the disease is a result of exposure to ionizing radiation in service, an assessment will be made as to the size and nature of the radiation dose or doses. When dose estimates provided pursuant to paragraph (a)(2) of this section are reported as a range of doses to which a veteran may have been exposed, exposure at the highest level of the dose range reported will be presumed.

(Authority: 38 U.S.C. 501)

- (2) Request for dose information. Where necessary pursuant to paragraph (a)(1) of this section, dose information will be requested as follows:
- (i) Atmospheric nuclear weapons test participation claims. In claims based upon participation in atmospheric nuclear testing, dose data will in all cases be requested from the appropriate office of the Department of Defense.
- (ii) Hiroshima and Nagasaki occupation claims. In all claims based on participation in the American occupation of Hiroshima or Nagasaki, Japan, prior to July 1, 1946, dose data will be requested from the Department of Defense.
- (iii) Other exposure claims. In all other claims involving radiation exposure, a request will be made for any available records concerning the veteran's exposure to radiation. These records normally include but may not be limited to the veteran's Record of Occupational Exposure to Ionizing Radiation (DD Form 1141), if maintained, service medical records, and other records which may contain information pertaining to the veteran's radiation dose

in service. All such records will be forwarded to the Under Secretary for Health, who will be responsible for preparation of a dose estimate, to the extent feasible, based on available methodologies.

- (3) Referral to independent expert. When necessary to reconcile a material difference between an estimate of dose, from a credible source, submitted by or on behalf of a claimant, and dose data derived from official military records, the estimates and supporting documentation shall be referred to an independent expert, selected by the Director of the National Institutes of Health, who shall prepare a separate radiation dose estimate for consideration in adjudication of the claim. For purposes of this paragraph:
- (i) The difference between the claimant's estimate and dose data derived from official military records shall ordinarily be considered material if one estimate is at least double the other estimate.
- (ii) A dose estimate shall be considered from a "credible source" if prepared by a person or persons certified by an appropriate professional body in the field of health physics, nuclear medicine or radiology and if based on analysis of the facts and circumstances of the particular claim.
- (4) Exposure. In cases described in paragraph (a)(2)(i) and (ii) of this section:
- (i) If military records do not establish presence at or absence from a site at which exposure to radiation is claimed to have occurred, the veteran's presence at the site will be conceded.
- (ii) Neither the veteran nor the veteran's survivors may be required to produce evidence substantiating exposure if the information in the veteran's service records or other records maintained by the Department of Defense is consistent with the claim that the veteran was present where and when the claimed exposure occurred.
- (b) Initial review of claims. (1) When it is determined:
- (i) A veteran was exposed to ionizing radiation as a result of participation in the atmospheric testing of nuclear weapons, the occupation of Hiroshima or Nagasaki, Japan, from September

1945 until July 1946, or other activities as claimed;

- (ii) The veteran subsequently developed a radiogenic disease; and
- (iii) Such disease first became manifest within the period specified in paragraph (b)(5) of this section; before its adjudication the claim will be referred to the Under Secretary for Benefits for further consideration in accordance with paragraph (c) of this section. If any of the foregoing 3 requirements has not been met, it shall not be determined that a disease has resulted from exposure to ionizing radiation under such circumstances.
- (2) For purposes of this section the term "radiogenic disease" means a disease that may be induced by ionizing radiation and shall include the following:
- (i) All forms of leukemia except chronic lymphatic (lymphocytic) leukemia:
 - (ii) Thyroid cancer;
 - (iii) Breast cancer;
 - (iv) Lung cancer;
 - (v) Bone cancer:
 - (vi) Liver cancer;
 - (vii) Skin cancer;
 - (viii) Esophageal cancer;
 - (ix) Stomach cancer;
 - (x) Colon cancer:
 - (xi) Pancreatic cancer;
 - (xii) Kidney cancer;
 - (xiii) Urinary bladder cancer;
- (xiv) Salivary gland cancer;
- (xv) Multiple myeloma;
- (xvi) Posterior subcapsular cataracts;
- (xvii) Non-malignant thyroid nodular disease:
 - (xviii) Ovarian cancer;
 - (xix) Parathyroid adenoma;
- (xx) Tumors of the brain and central nervous system;
 - (xxi) Cancer of the rectum;
- (xxii) Lymphomas other than Hodg-kin's disease;
 - (xxiii) Prostate cancer; and
- (xxiv) Any other cancer.

(Authority: 38 U.S.C. 501)

(3) Public Law 98-542 requires VA to determine whether sound medical and scientific evidence supports establishing a rule identifying polycythemia

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vera as a radiogenic disease. VA has determined that sound medical and scientific evidence does not support including polycythemia vera on the list of known radiogenic diseases in this regulation. Even so, VA will consider a claim based on the assertion that polycythemia vera is a radiogenic disease under the provisions of paragraph (b)(4) of this section. (Authority: Pub. L. 98–542, section 5(b)(2)(A)(i), (iii)).

- (4) If a claim is based on a disease other than one of those listed in paragraph (b)(2) of this section, VA shall nevertheless consider the claim under the provisions of this section provided that the claimant has cited or submitted competent scientific or medical evidence that the claimed condition is a radiogenic disease.
- (5) For the purposes of paragraph (b)(1) of this section:
- (i) Bone cancer must become manifest within 30 years after exposure;
- (ii) Leukemia may become manifest at any time after exposure;
- (iii) Posterior subcapsular cataracts must become manifest 6 months or more after exposure; and
- (iv) Other diseases specified in paragraph (b)(2) of this section must become manifest 5 years or more after exposure.

(Authority: 38 U.S.C. 501; Pub. L. 98-542)

- (c) Review by Under Secretary for Benefits. (1) When a claim is forwarded for review pursuant to paragraph (b)(1) of this section, the Under Secretary for Benefits shall consider the claim with reference to the factors specified in paragraph (e) of this section and may request an advisory medical opinion from the Under Secretary for Health.
- (i) If after such consideration the Under Secretary for Benefits is convinced sound scientific and medical evidence supports the conclusion it is at least as likely as not the veteran's disease resulted from exposure to radiation in service, the Under Secretary for Benefits shall so inform the regional office of jurisdiction in writing. The Under Secretary for Benefits shall set forth the rationale for this conclusion, including an evaluation of the claim under the applicable factors specified in paragraph (e) of this section.

- (ii) If the Under Secretary for Benefits determines there is no reasonable possibility that the veteran's disease resulted from radiation exposure in service, the Under Secretary for Benefits shall so inform the regional office of jurisidiction in writing, setting forth the rationale for this conclusion.
- (2) If the Under Secretary for Benefits, after considering any opinion of the Under Secretary for Health, is unable to conclude whether it is at least as likely as not, or that there is no reasonable possibility, the veteran's disease resulted from radiation exposure in service, the Under Secretary for Benefits shall refer the matter to an outside consultant in accordance with paragraph (d) of this section.
- (3) For purposes of paragraph (c)(1) of this section, "sound scientific evidence" means observations, findings, or conclusions which are statistically and epidemiologically valid, are statistically significant, are capable of replication, and withstand peer review, and "sound medical evidence" means observations, findings, or conclusions which are consistent with current medical knowledge and are so reasonable and logical as to serve as the basis of management of a medical condition.
- (d) Referral to outside consultants. (1) Referrals pursuant to paragraph (c) of this section shall be to consultants selected by the Under Secretary for Health from outside VA, upon the recommendation of the Director of the National Cancer Institute. The consultant will be asked to evaluate the claim and provide an opinion as to the likelihood the disease is a result of exposure as claimed.
- (2) The request for opinion shall be in writing and shall include a description of:
- (i) The disease, including the specific cell type and stage, if known, and when the disease first became manifest:
- (ii) The circumstances, including date, of the veteran's exposure:
- (iii) The veteran's age, gender, and pertinent family history;
- (iv) The veteran's history of exposure to known carcinogens, occupationally or otherwise;
- (v) Evidence of any other effects radiation exposure may have had on the veteran; and

(vi) Any other information relevant to determination of causation of the veteran's disease.

The Under Secretary for Benefits shall forward, with the request, copies of pertinent medical records and, where available, dose assessments from official sources, from credible sources as defined in paragraph (a)(3)(ii) of this section, and from an independent expert pursuant to paragraph (a)(3) of this section.

- (3) The consultant shall evaluate the claim under the factors specified in paragraph (e) of this section and respond in writing, stating whether it is either likely, unlikely, or approximately as likely as not the veteran's disease resulted from exposure to ionizing radiation in service. The response shall set forth the rationale for the consultant's conclusion, including the consultant's evaluation under the applicable factors specified in paragraph (e) of this section. The Under Secretary for Benefits shall review the consultant's response and transmit it with any comments to the regional office of jurisdiction for use in adjudication of the claim.
- (e) Factors for consideration. Factors to be considered in determining whether a veteran's disease resulted from exposure to ionizing radiation in service include:
- (1) The probable dose, in terms of dose type, rate and duration as a factor in inducing the disease, taking into account any known limitations in the dosimetry devices employed in its measurement or the methodologies employed in its estimation;
- (2) The relative sensitivity of the involved tissue to induction, by ionizing radiation, of the specific pathology;
- (3) The veteran's gender and pertinent family history;
- (4) The veteran's age at time of exposure;
- (5) The time-lapse between exposure and onset of the disease; and
- (6) The extent to which exposure to radiation, or other carcinogens, outside of service may have contributed to development of the disease.
- (f) Adjudication of claim. The determination of service connection will be made under the generally applicable provisions of this part, giving due con-

sideration to all evidence of record, including any opinion provided by the Under Secretary for Health or an outside consultant, and to the evaluations published pursuant to §1.17 of this title. With regard to any issue material to consideration of a claim, the provisions of §3.102 of this title apply.

(g) Willful misconduct and supervening cause. In no case will service connection be established if the disease is due to the veteran's own willful misconduct, or if there is affirmative evidence to establish that a supervening, nonservice-related condition or event is more likely the cause of the disease.

(Authority: Pub. L. 98-542)

[50 FR 34459, Aug. 26, 1985, as amended at 54 FR 42803, Oct. 18, 1989; 58 FR 16359, Mar. 26, 1993. Redesignated at 59 FR 5107, Feb. 3, 1994, and amended at 59 FR 45975, Sept. 6, 1994; 60 FR 9628, Feb. 21, 1995; 60 FR 53277, Oct. 13, 1995; 63 FR 50994, Sept. 24, 1998; 67 FR 6871, Feb. 14, 2002]

$\S 3.312$ Cause of death.

- (a) General. The death of a veteran will be considered as having been due to a service-connected disability when the evidence establishes that such disability was either the principal or a contributory cause of death. The issue involved will be determined by exercise of sound judgment, without recourse to speculation, after a careful analysis has been made of all the facts and circumstances surrounding the death of the veteran, including, particularly, autopsy reports.
- (b) Principal cause of death. The service-connected disability will be considered as the principal (primary) cause of death when such disability, singly or jointly with some other condition, was the immediate or underlying cause of death or was etiologically related thereto.
- (c) Contributory cause of death. (1) Contributory cause of death is inherently one not related to the principal cause. In determining whether the service-connected disability contributed to death, it must be shown that it contributed substantially or materially; that it combined to cause death; that it aided or lent assistance to the production of death. It is not sufficient to show that it casually shared in producing death, but rather it must be