

Citation Nr: 22013015

Decision Date: 03/08/22 Archive Date: 03/08/22

DOCKET NO. 16-23 510

DATE: March 8, 2022

ORDER

Entitlement to service connection for pancreatic cancer is granted.

FINDING OF FACT

The evidence supports a finding that the Veteran's pancreatic cancer was a result of his service-connected diabetes mellitus, type II.

CONCLUSION OF LAW

The criteria for service connection for pancreatic cancer, to include as secondary to the Veteran's service-connected diabetes mellitus, type II, have been met. 38 U.S.C. § 1110; 38 C.F.R. § 3.310 (a).

REASONS AND BASES FOR FINDING AND CONCLUSION

The Veteran served on active duty from October 1965 to October 1968. The Veteran died in April 2016; the Appellant is his surviving spouse, who was properly substituted as claimant. See 38 U.S.C. § 5121A.

This matter comes before the Board of Veterans Appeals (Board) on appeal from a March 2016 Rating Decision by a Department of Veterans Affairs (VA) Regional Office (RO).

Pursuant to the Veterans Claims Assistance Act of 2000 (VCAA), VA has duties to notify and assist claimants in substantiating a claim for VA benefits. 38 U.S.C. §§ 5100, 5102, 5103, 5103A, 5107, and 5126; 38 C.F.R. §§ 3.102, 3.156(a), 3.159, and 3.326(a) (2019); see also *Pelegrini v. Principi*, 18 Vet. App. 112 (2004); *Quartuccio v. Principi*, 16 Vet. App. 183 (2002); *Mayfield v. Nicholson*, 444 F.3d 1328 (Fed. Cir. 2006); *Dingess/Hartman v. Nicholson*, 19 Vet. App. 473 (2006). Here, neither the appellant nor her representative has raised any issues with regard to the duty to notify or duty to assist. See *Scott v. McDonald*, 789 F.3d 1375, 1381 (Fed. Cir. 2015) (holding that "the Board's obligation to read filings in a liberal manner does not require the Board . . . to search the record and address procedural arguments when the veteran fails to raise them before the Board."); *Dickens v. McDonald*, 814 F.3d 1359, 1361 (Fed. Cir. 2016) (applying *Scott* to a duty to assist argument).

This issue was previously before the Board in July 2021, at which time it was remanded in order to obtain an addendum VA opinion. An additional VA medical opinion was obtained in August 2021. Thus, the Board finds that there has been substantial compliance with its previous remand directives. See *Stegall v. West*, 11 Vet. App. 268 (1998); *D'Aries v. Peake*, 22 Vet. App. 97 (2008) (holding that only substantial, and not strict, compliance with the terms of a remand request is required).

The Appellant is seeking service connection for her husband's pancreatic cancer, which the Veteran contended was secondary to his service-connected diabetes mellitus, type II or, in the alternative, developed due to herbicide exposure.

Service connection may be granted for a disability resulting from a disease or injury incurred in or aggravated by active service. 38 U.S.C. §§ 1110, 1131; 38 C.F.R. § 3.303(a). To establish entitlement to service-connected compensation benefits, a Veteran must show: (1) the existence of a present disability; (2) in-service incurrence or aggravation of a disease or injury; and (3) a causal relationship between the present disability and the disease or injury incurred or aggravated during service—the so-called "nexus" requirement." *Holton v. Shinseki*, 557 F.3d 1362, 1366 (Fed. Cir. 2010) (quoting *Shedden v. Principi*, 381 F.3d 1163, 1167 (Fed. Cir. 2004)).

Service connection may alternatively be established on a secondary basis for a disability which is proximately due to, or the result of, a service-connected disability. 38 C.F.R. §

3.310(a). Secondary service connection may also be established for a disorder which is aggravated by a service-connected disability; compensation may be provided for the degree of disability (but only that degree) over and above the degree of disability existing prior to the aggravation. See 38 C.F.R. § 3.310(b); *Allen v. Brown*, 8 Vet. App. 374 (1995).

In order to prevail on the issue of secondary service connection, the record must show: (1) evidence of a current disability; (2) evidence of a service-connected disability; and (3) medical nexus evidence establishing a connection between the service-connected disability and the current disability. See *Wallin v. West*, 11 Vet. App. 509, 512 (1998); see also *Allen*, *supra*.

Proximate cause is defined as [t]hat which, in a natural and continuous sequence, unbroken by any efficient intervening cause, produces injury, and without which the result would not have occurred. *Black's Law Dictionary* 1225 (6th ed. 1990); see *Forshey v. West*, 12 Vet. App. 71, 74 (1998), *aff'd sub nom. Forshey v. Principi*, 284 F.3d 1335 (Fed. Cir. 2002), *rev'd on other grounds by, Morgan v. Principi*, 327 F.3d 1357 (Fed. Cir. 2003) (adopting proximate cause definition); VAOPGCPREC 6-03. When there are potentially multiple causes of a harm, an action is considered to be a proximate cause of the harm if it is a substantial factor in bringing about the harm and the harm would not have occurred but for the action. VAOPGCPREC 6-03 (citing *Shyface v. Secretary of Health & Human Svs.*, 165 F.3d 1344, 1352 (Fed. Cir. 1999)). VA General Counsel precedential opinions are binding on the Board. 38 U.S.C. § 7104(c); 38 C.F.R. § 14.507.

In January 2016, the Veteran underwent a VA examination in conjunction with his claim. The examiner reviewed the claims file and conducted an in-person examination of the Veteran. The examiner found that the Veteran was diagnosed with pancreatic cancer as of March 2013. The examiner opined that it was less likely than not that the Veteran's pancreatic cancer was the result of his service-connected diabetes mellitus, type II. In reaching his conclusion, although the examiner acknowledged "reports of a 3 [times] increased risk for type II diabetics to developed pancreatic carcinoma," the examiner concluded that "this is often attributed to the pancreatic cancer causing the diabetes." The examiner did not address whether the Veteran's service-connected diabetes mellitus, type II, aggravated his pancreatic cancer beyond its natural progression, nor did he opine as to whether the Veteran's pancreatic cancer was related to service, including to his conceded exposure to herbicide agents.

In a June 2019 Remand, the Board noted that the January 2016 examiner did not address the fact that the Veteran's diabetes predated his pancreatic cancer by 13 years, and that the examiner's opinion represented a generalized medical treatise rationale not tailored to the specific facts of the Veteran's case. The Board then concluded that the January 2016 medical opinion was inadequate, as it was supported by a conclusory, incomplete rationale, did not take the Veteran's specific circumstances into account, and did not address whether his diabetes aggravated his pancreatic cancer beyond its natural progression or whether his pancreatic cancer was directly related to service, including herbicide exposure.

As such, the Board remanded the matter to obtain an additional VA medical opinion. Pursuant to the Board's June 2019 Remand, another VA opinion was obtained in November 2019. The November 2019 VA examiner opined that it was at least as likely as not that the Veteran's pancreatic carcinoma was caused by his service-connected diabetes mellitus, type II. In support of this conclusion, the examiner explained that, "Continued study of this relationship has shown that there is 2-3 times increased incidence of pancreatic cancer in type II diabetics of greater than 5 years duration compared to non diabetics or of less than 5 years duration. This veteran had been a diabetic 13 years in 1998 when he died."

Despite the positive VA opinion, the RO requested another VA medical opinion as to the probable etiology of the Veteran's pancreatic cancer in January 2020, finding that the November 2019 opinion lacked sufficient rationale. As such, an additional VA opinion was obtained in February 2020. The February 2020 examiner opined that it was less likely as not that the Veteran's pancreatic cancer began in, or was otherwise caused by or related to, his time in service, to include any known exposure to herbicide agents. In support of this conclusion, the examiner explained that:

There is no evidence of a diagnosis of, or other presentation of PC upon review of STR.

Additionally, PC is almost always a devastating illness that causes death within relatively

short periods of time, from the time of diagnosis, usually weeks, months, or relatively short period of years, depending on at what stage the condition is diagnosed at. Most often it is diagnosed at a later stage, resulting in the often short period of time until death. It would be unheard of for it to go for 40 to 50 years from onset to death.

A large study, Institute of Medicine, Committee to Review the Health Effects in Vietnam Veterans of Exposure to Herbicides. Veterans and Agent Orange: Update 2002. Washington: National Academy Press, 2003 [. . .] concluded the following – "Cancers of the esophagus, stomach, pancreas, colon, and rectum have been extensively studied in Vietnam veterans, occupational groups with herbicide exposure, and people exposed to dioxins. These studies have yielded a fairly consistent pattern of no association between these exposures and any GI cancer."

The February 2020 examiner also opined that it was less likely as not that the Veteran's pancreatic cancer was caused by his service-connected diabetes mellitus, type II. In support of this conclusion, the examiner explained that:

Diabetes has not been established as a risk factor for pancreatic cancer. Although epidemiologic studies describe an association between pancreatic cancer and diabetes mellitus there are competing theories to explain this association. One model suggests an etiologic relationship whereby diabetes mellitus causes pancreatic cancer. Other models suggest diabetes may be a consequence rather than a cause of pancreatic cancer. There is evidence supporting both of these models and there is no current consensus regarding which model best explains the observed association . . . Thus diabetes mellitus has not been established as a risk factor for pancreatic cancer.

Again, in a July 2021 Remand, the Board found that the February 2020 VA opinion broadly discussed conflicting medical literature with respect to the relationship between diabetes and pancreatic cancer, and failed to discuss facts specific to the Veteran's case. As such, the matter was remanded again in order to obtain an adequate etiological opinion.

Pursuant to the Board's July 2021 Remand, an additional VA opinion was obtained in August 2021. The August 2021 examiner concluded that it was less likely as not (less than 50 percent probability) that the Veteran's pancreatic cancer was incurred in or caused by an in-service event, injury, or disease, to include exposure to herbicides such as Agent Orange during service. However, the examiner also opined that it was at least as likely as not (50 percent or greater probability) that the Veteran's pancreatic cancer was caused or aggravated by his service-connected diabetes mellitus, type II. In support of these opinions, the examiner explained that:

The medical literature documents that long-term Type 2 Diabetes Mellitus is associated with a 1.5 to 2.0 fold increase in the risk of developing pancreatic cancer, and after cigarette smoking and obesity, is the third modifiable risk factor for developing pancreatic cancer. It should be noted that cigarette smoking and obesity are also established risk factors for developing Type 2 Diabetes Mellitus; therefore, it is not completely certain if Type 2 Diabetes Mellitus, in and of itself, is an independent risk factor for developing pancreatic cancer. The medical literature also documents that insulin resistance with associated hyperglycemia, hyperinsulinemia, and inflammation are possibly the underlying mechanisms contributing to the development of diabetes-associated pancreatic cancer. It has been shown that various signaling pathways that regulate the metabolic process also play an important role in cell proliferation and tumor growth, which can result in the development of pancreatic cancer. The medical literature also documents that the antidiabetic medication, Metformin, has been associated with a reduced risk in the development of pancreatic cancer in patients with Type 2 Diabetes Mellitus and has been recognized as an antitumor agent with the potential to prevent and / or treat pancreatic cancer. It is important to note that Veteran Behrendt had been on Metformin in the past for his treatment of Type 2 Diabetes Mellitus (T2DM). T2DM has been shown to be associated with an increased risk of developing liver cancer, pancreatic cancer, endometrial cancer, colorectal cancer, breast cancer, and bladder cancer [1-4].

Pancreatic cancer is known to cause diabetes and the onset of the diabetes can develop a few years prior to the diagnosis of the pancreatic cancer. This has been shown in more than 20 case-control studies and in approximately 20 cohort and nested case-control studies [4]. There is some limited evidence in the medical literature that supports an independent association between long-standing T2DM and pancreatic cancer regardless of smoking status or

BMI; however, these studies have been limited in their size and scope with numerous authors noting that larger studies need to be performed. Biomarker studies are supportive of a relationship between long-standing T2DM and the risk for developing pancreatic cancer. These studies have involved such biomarkers as serum insulin levels [5], circulating levels of C-peptide / insulin [6], and postload plasma glucose levels greater than 200 mg/dL [7-9].

The mechanism by which T2DM can cause pancreatic cancer is complex and not completely known. What is known is that the pathophysiology involves metabolic, hormonal, and immunological alterations that influence pancreatic cells to become neoplastic. The most well understood mechanism underlying the association between long-standing T2DM and pancreatic cancer involves insulin resistance with compensatory hyperinsulinemia and elevated levels of circulating insulin-like growth factors. Various animal studies have shown that stimulation of islet cells to proliferate can enhance pancreatic ductal cell carcinogenesis [10], and destruction of islet cells by treatment with Streptozotocin (a naturally occurring alkylating antineoplastic agent that is particularly toxic to the insulin-producing beta cells of the pancreas in mammals) or Alloxan (a toxic glucose analogue that selectively destroys the insulin-producing beta cells in the pancreas) can inhibit pancreatic cancer induction [11,12]. Additional animal studies have demonstrated that treatment with the biguanide, Metformin, combined with a high-fat diet can normalize the rate of islet cell turnover, thus preventing pancreatic tumors to develop [13,36-46]. The literature documents that insulin is a growth-promoting hormone with mitogenic effects, which promotes cell proliferation and increases glucose use, which are important for tumor development and progression [14]. Insulin also upregulates the bioavailability of insulin-like growth factors (IGFs) by reducing hepatic production of insulin-like growth factor-binding proteins [15,16]. IGFs have mitogenic (mitogens are a peptide or small protein that induce a cell to begin cell division) and anti-apoptotic (apoptosis = natural programmed cell death) properties making them potent at increasing islet cell proliferation. In addition to the direct growth-promoting effects of insulin and IGFs, T2DM and / or related obesity can increase the risk of developing pancreatic cancer by increasing oxidative stress and inflammatory responses [17-35].

[. . . .]

The medical literature is silent on Agent Orange being a direct cause for developing pancreatic cancer, or in and of itself, causing an increased risk for developing pancreatic cancer.

Therefore, based on the evidence provided in the veteran's medical records and a review of the medical literature, the veteran's pancreatic cancer was multifactorial in etiology. Therefore, it is at least as likely as not that the veteran's long-standing Type II Diabetes Mellitus was a contributing cause to the development of his pancreatic cancer. Along with the T2DM, other likely contributing causes were the veteran's age being greater than 50 years, being of male gender, having a history of cigarette smoking, and being obese.

Based on the above evidence, the Board finds that entitlement service connection for pancreatic cancer is warranted. There is no dispute that the Veteran had pancreatic carcinoma, as noted in the VA treatment records generated prior to his death. Moreover, the November 2019 and August 2021 VA examiners opined that it was at least as likely as not that the Veteran's pancreatic cancer was caused by his service-connected diabetes mellitus, type II, among other factors. In support of his positive nexus opinion, the August 2021 examiner gave a detailed rationale supported by medical treatise evidence as well as the Veteran's specific medical history.

Further, the Board notes that the Veteran has been service connected for diabetes mellitus, type II, since July 2001; thus, the last element for secondary service-connection, a service-connected disability, has also been met.

Considering the foregoing, the Board finds that all elements of service connection on a secondary basis for pancreatic cancer have been met and service connection is thus warranted. See 38 C.F.R. § 3.310(b); *Allen v. Brown*, 8 Vet. App. 374 (1995).

Tiffany Dawson

Veterans Law Judge

Board of Veterans' Appeals

Attorney for the Board Anthony M. Flamini

The Board's decision in this case is binding only with respect to the instant matter decided. This decision is not precedential and does not establish VA policies or interpretations of general applicability. 38 C.F.R. § 20.1303.