

Letters to the Editor

RE: "RISK OF SECOND PRIMARY MALIGNANCIES IN WOMEN WITH PAPILLARY THYROID CANCER"

We read with great interest the article by Canchola et al. (1) concerning the occurrence of second primary cancers after diagnosis of thyroid cancer in women with papillary thyroid cancer. The authors presented follow-up data on 10,932 female thyroid cancer patients. Among them, 279 (2.6 percent) developed a second primary cancer during 50,938 person-years of follow-up (mean = 4.7 years) (1). The results of this study showed an increased risk of in situ breast cancer, kidney cancer, and melanoma. The authors recommended increased awareness of this cancer association for early diagnosis and management of the second malignancies. Similar analyses were performed for colon, lung, endometrial, and ovarian cancer, but no association was found, although the number of cases observed in some subgroups was small.

However, the study by Canchola et al. (1) did not address the reciprocal risk of thyroid cancer after the first diagnosis of either breast cancer in situ, kidney cancer, or melanoma. Interestingly, we have investigated the occurrence of second malignancies in female patients with differentiated thyroid cancer either before the appearance of the thyroid cancer or later, and we would like to share our findings. Specifically, we followed 120 female patients with differentiated thyroid cancer who were treated with surgery followed by 3.7 MBq (100 mCi) of iodine-131 at our institutions from 1996 to 2002. The appearance of other primary cancers before or after the diagnosis of thyroid cancer was studied for a period of 3–9 years.

Overall, seven of 120 (5.8 percent) patients had second malignancies. The diagnosis of a second malignancy predated thyroid cancer diagnosis in four patients (3.3 percent) and followed thyroid cancer diagnosis in three patients (2.5 percent). The preexisting malignancies consisted of a colorectal cancer diagnosed in one woman 1 year prior to thyroid carcinoma, an undifferentiated mediastinal tumor diagnosed in one woman 26 years prior to thyroid carcinoma, and two breast carcinomas diagnosed in two women 1 and 14 years prior to thyroid carcinoma. The metachronous malignancies consisted of one colorectal cancer diagnosed in a woman 1 year after thyroid cancer and two breast cancers diagnosed in two women 1 and 7 years after thyroid cancer.

Our findings are in accordance with the results observed by Canchola et al. (1), though in a much smaller number of patients. However, the appearance of some malignancies prior to thyroid cancer diagnosis suggests that the association of thyroid cancer with other tumors may not represent a treatment effect but rather may be due to common risk factors. In a previous study that pooled data from 13 cancer registries, Sandeep et al. (2) found a 30 percent increased risk of second primary cancers after thyroid cancer. They also found an increased risk of thyroid cancer after the oc-

currence of a variety of these cancers, suggesting possible shared risk factors and treatment effects in the development of these cancers (2). In another study carried out in a European cohort of 6,841 thyroid cancer patients, Rubino et al. (3) found 576 patients with second primary malignancies, demonstrating an increased risk of 27 percent. Similarly, after studying 49,207 breast cancer patients and 4,911 thyroid cancer patients, Sadetzki et al. (4) suggested possible early exposure to common risk factors or genetic susceptibility for both malignancies. Thus, the excess incidence of breast carcinoma after thyroid carcinoma may not be related to radiation treatment (5).

In summary, it appears that there is a relation between thyroid cancer and a variety of other malignancies. Future studies should focus on genetic predisposition, specific gene alterations, and/or common risk factors for the development of these tumors.

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