

GEOGRAPHICAL VARIATIONS IN THE DIAGNOSIS OF THYROID CANCER: A COMPARATIVE ANALYSIS OF TWO CANCER REGISTRIES IN FRANCE

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Objective

We aimed to evaluate geographical variations in the characteristics of patients with thyroid cancer using data from two French cancer registries

Methods

- The analysis was conducted as part of a collaborative work between the cancer registries of the Marne-Ardenne region and of the Rhône region (Figure 1)
- Databases from the registries were merged after recoding variables to allow comparisons between both populations
- The characteristics of the patients in both registries were compared using the Chi-2 test or Fisher's exact test as appropriate

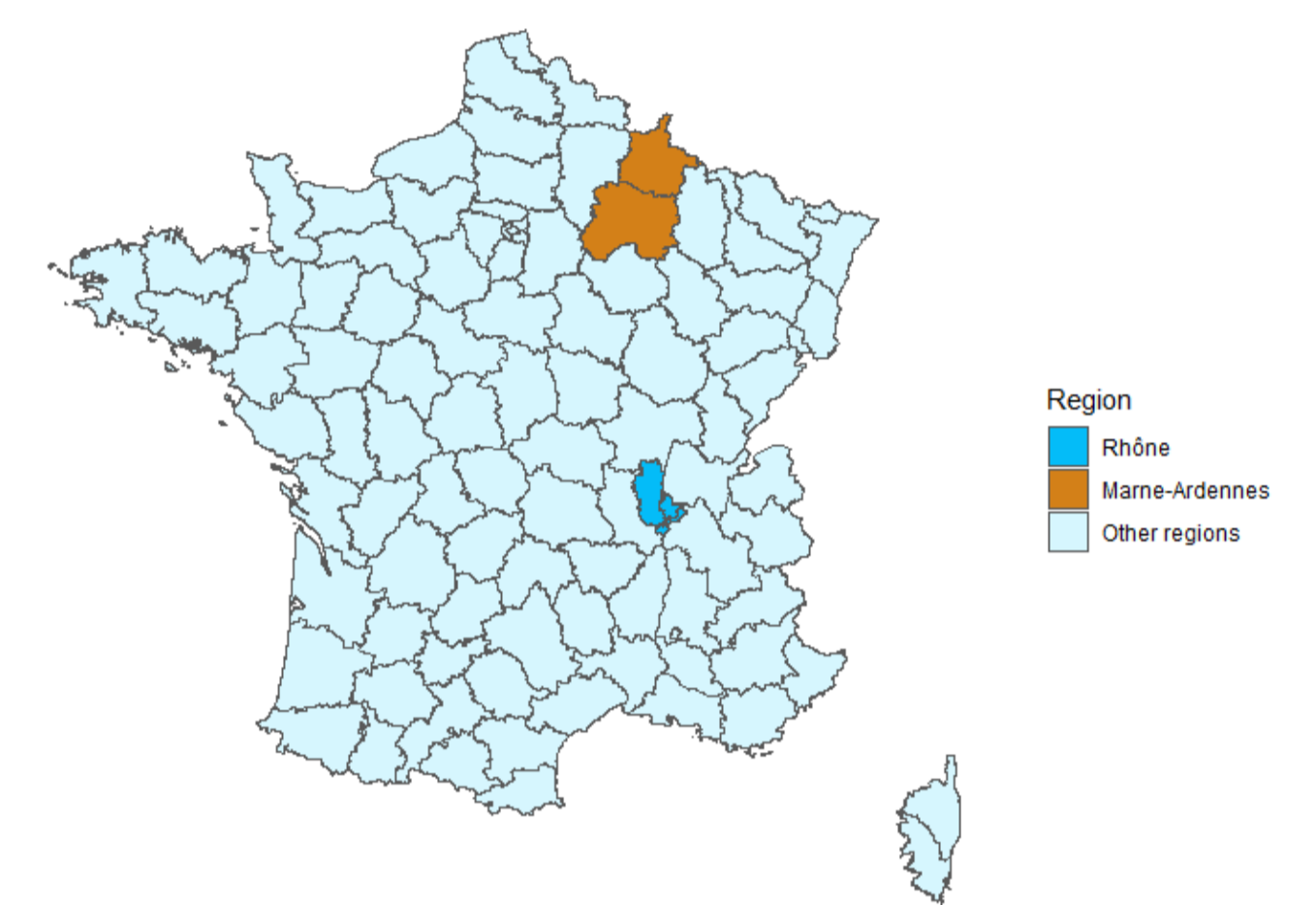


Figure 1: Location of the regions under study.

Table 1: Characteristics of patients in the Rhône and Marne-Ardenne thyroid cancer registries (2000-2014).

Variable	Marne-Ardenne ^a	Rhône ^a	P-value
N	1546	3370	
Sex : male – n (%)	382 (24.7)	808 (24.0)	0.58
Diagnosis - n (%)			<0.001 ^b
Anaplastic	20 (1.3)	32 (0.9)	
Oxyphilic cells	57 (3.7)	34 (1.0)	
Insular or with insular component	17 (1.1)	104 (3.1)	
Medullar or with medullar component	57 (3.7)	85 (2.5)	
Papillary microcancer	538 (34.8)	961 (28.5)	
Papillary (except microcancers)	730 (47.2)	2053 (60.9)	
Vesicular	127 (8.2)	95 (2.8)	
Unknown	0 (0.0)	6 (0.2)	

^a The percentages correspond to proportions of non-missing values. ^b Fisher's exact test.

Results

- The mean age of cases was similar in both registries : 50.8 years (SD 15.0) vs 49.6 years (SD 15.7)
- Tumours in the T1 class were more frequent in the Marne-Ardenne registry: 964 (65.4%) vs 1867 (55.5%) (TNM 2010 classification)
- Vesicular cancers were more frequent in the Marne-Ardenne registry: 127 (8.2%) vs 95 (2.8%) (Table 1)

Conclusions

- Micropapillary thyroid cancers were more frequent in the Marne-Ardenne registry
- Differences in encoding or anatomical pathology practice (diagnosis of vesicular cancer) could explain some of the observed differences (1)
- As the incidence of thyroid cancer is increasing, it is essential that cancer registries collaborate to study the causes of geographical variations in the diagnosis of this condition

References

1. Hafdi-Nejjari Z, Abbas-Chorfa F, Decaussin-Petrucci M, Berger N, Couray-Targe S, Schott A-M, et al. Impact of thyroid surgery volume and pathologic detection on risk of thyroid cancer: A geographical analysis in the Rhône-Alpes region of France. Clin Endocrinol (Oxf). 2018 Dec;89(6):824-33.