

Overdiagnosis of thyroid cancer in the Marne and Ardennes Departments of France from 1975 to 2014



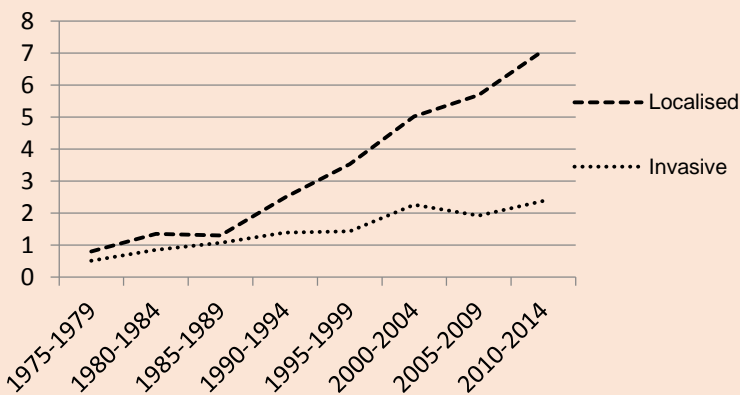
Caroline Saint-Martin¹, Moustapha Dramé^{2,3}, Sandrine Dabakuyo¹, Lukshe Kanagaratnam^{2,3}, Patrick Arveux⁴, Claire Schwartz¹
 1-Thyroid Cancer Registry, Institut Jean Godinot, Reims, France, 2-University of Reims Champagne-Ardenne, Faculty of Medicine, EA 3757, Reims, France, 3-Reims teaching hospitals, Robert Debré hospital, department of research and innovation, Reims, France, 4-Côte d’or Breast Cancer Registry, Georges François Leclerc Center, Dijon, France

Introduction: Incidence of thyroid cancer has increased considerably in France in recent years, but the mortality rate has declined only slightly. Part of this increased incidence could be attributable to overdiagnosis. We aimed to estimate the contribution of overdiagnosis to the incidence of papillary thyroid cancer.

Methods: Incidence rates were calculated based on data from the specialised Marnes-Ardennes thyroid cancer registry, for cancers diagnosed between 1975 and 2014, by age category and by five-year period. The population was divided into two groups according to pTNM classification at diagnosis (i.e. localised or invasive). Overdiagnosis was defined as the difference in incidence rates between the invasive cancer and localised cancer groups. This rate was then divided by the incidence rate in the localised cancer group for the most recent period (2010-2014) to obtain the proportion of cancers attributable to overdiagnosis.

Results: In total, 2008 patients were included.

Incidence rates of papillary thyroid cancer standardised on the world population, in the localised cancer and invasive cancer groups, per 100,000 and per 5-year period



Proportion of incidence attributable to overdiagnosis for the period 2010-2014 in women and men, by age group

| | 2010-2014 |
|----------------------------------|-----------|
| Women <50 years | |
| Overdiagnosis rate (per 100,000) | 4.20 |
| Percentage overdiagnosis (%) | 62 |
| Women ≥50 years | |
| Overdiagnosis rate (per 100,000) | 3.45 |
| Percentage overdiagnosis (%) | 73 |
| Men <50 years | |
| Overdiagnosis rate (per 100,000) | 0.07 |
| Percentage overdiagnosis (%) | 7 |
| Men ≥50 years | |
| Overdiagnosis rate (per 100,000) | 1.00 |
| Percentage overdiagnosis (%) | 65 |

Conclusion: We observed a high proportion of cancers attributable to overdiagnosis. This finding raises the issue of patient management, with the risk of overtreatment, and the repercussions on quality of life for patients diagnosed with cancer.