

# Epidemiology of cutaneous melanoma in the Doubs "département"

## What has changed in the past 20 years?



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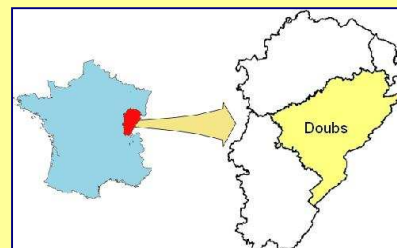
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### Context

- ❖ Important increase in the incidence of cutaneous melanoma during the past 20 years (+4.99% per year during the 1983-2002 period for men, +4.19% per year for women)
- ❖ Publication of recommendations for the prevention of cutaneous melanoma in France
- ❖ Screening programs and information campaigns made in the Doubs "département" since 1990

### Objectives

- ❖ Describe the epidemiology of cutaneous melanoma between 1986 and 2003 in the Doubs "département"
- ❖ Study the evolution of repartition by histogenetic form and thickness



The Doubs « département »

### Patients

- ❖ All cases of cutaneous melanoma diagnosed during the 1986-2003 period in the Doubs "département" (total general population 499 361 inhabitants in 1999)
- ❖ Localization, histology and thickness of tumours on operative specimen were colligated

### Statistical methods

- ❖ Age-standardized rates using European standard population for men and women
- ❖ Age-Period model for each sex for thin (Breslow ≤ 1mm) and thick (Breslow > 1mm) tumours:
  - Age trends smoothed using a quadratic autoregressive smoothing
  - Period trends smoothed using second degree autoregressive smoothing
  - Bayesian framework
  - Short-term projection for the 2004-2006 period

### Age-period model

- ❖ Period evolution (Figure 2):
  - ❖ Risk of thick melanoma was multiplied by 1.15 [95% credibility interval: 0.66; 1.99] for women and by 1.28 [95% credibility interval: 0.75; 2.19] for men between the 1986-1988 and 2001-2003 periods
  - ❖ Risk of thin melanoma was multiplied by 1.78 [95% credibility interval: 1.18; 2.77] for women and by 4.07 [95% credibility interval: 2.23; 8.22] for men in the same time.
- ❖ Age evolution (Figure 3):
  - ❖ For women, the risk of thin melanoma increased until the age of 51-53, and then decreased slowly; thick tumours is relatively rare before the age of 50, but the risk increased very rapidly after this age.
  - ❖ For men, the risk of melanoma increased with age for both thin and thick tumours.

### Incidence

- ❖ 811 cutaneous melanoma diagnosed between 1986 and 2003 (313 for men and 498 for women)
- ❖ Important increase in incidence in both sexes (cf table 1), especially for Superficial Spreading Melanoma type (cf Figure 1)

	Age-standardized incidence rate for 100,000 py [95% confidence interval]	
	1986-1988	2001-2003
<b>Men</b>	5.08 [3.29; 6.87]	9.72 [7.52; 11.92]
<b>Women</b>	8.55 [6.40; 10.70]	10.90 [8.65; 13.16]

Table 1: Age-standardized incidence rates for men and women during the 1986-1988 and the 2001-2003 periods

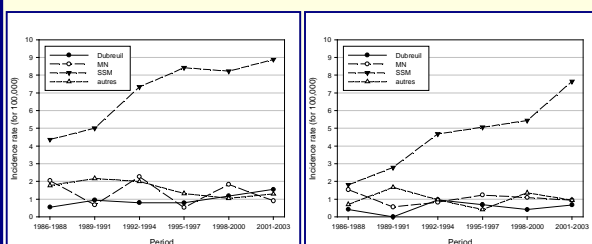


Figure 1: Evolution of incidence crude rates of CM according to the histogenetic type; women (left), men (right)

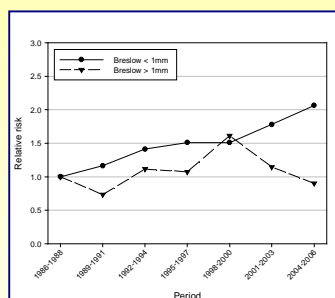


Figure 2: Period effect according to the tumour thickness; women (left), men (right)

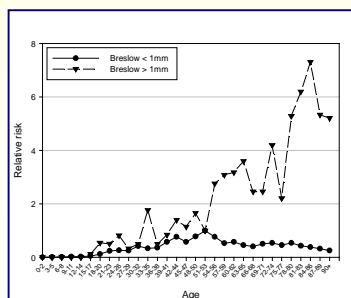
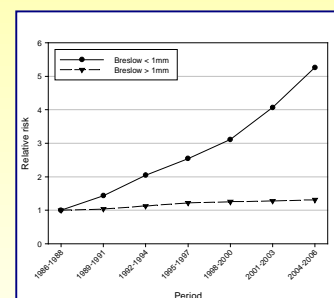
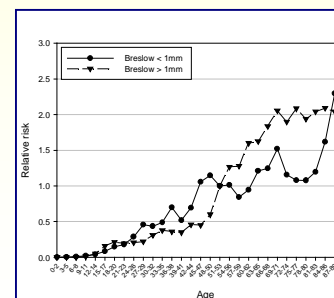


Figure 3: Age effect according to the tumour thickness ; women (left), men (right)



### Conclusion

During the past 20 years, the number of CM dramatically increased in the Doubs "département", like in other "départements" and countries. However, a part of this increase may be due to modifications in diagnostic practices. Most CM are now diagnosed at an early stage, with a relatively small thickness and a good prognosis. This may be a consequence of information campaigns organized in France during the past decade, and of the screening recommendations. However, these prevention programs seem to be insufficiently effective in some populations (old people, women) in which melanoma is still diagnosed at a late stage.