

# Second primary cancer among head and neck cancer survivors

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Improvements of  
cancer treatments

More frequent  
early detection

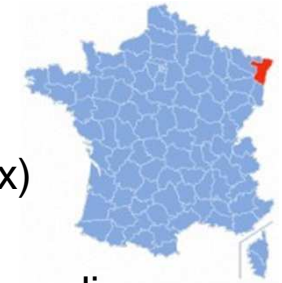


The number of people living with a cancer is increasing

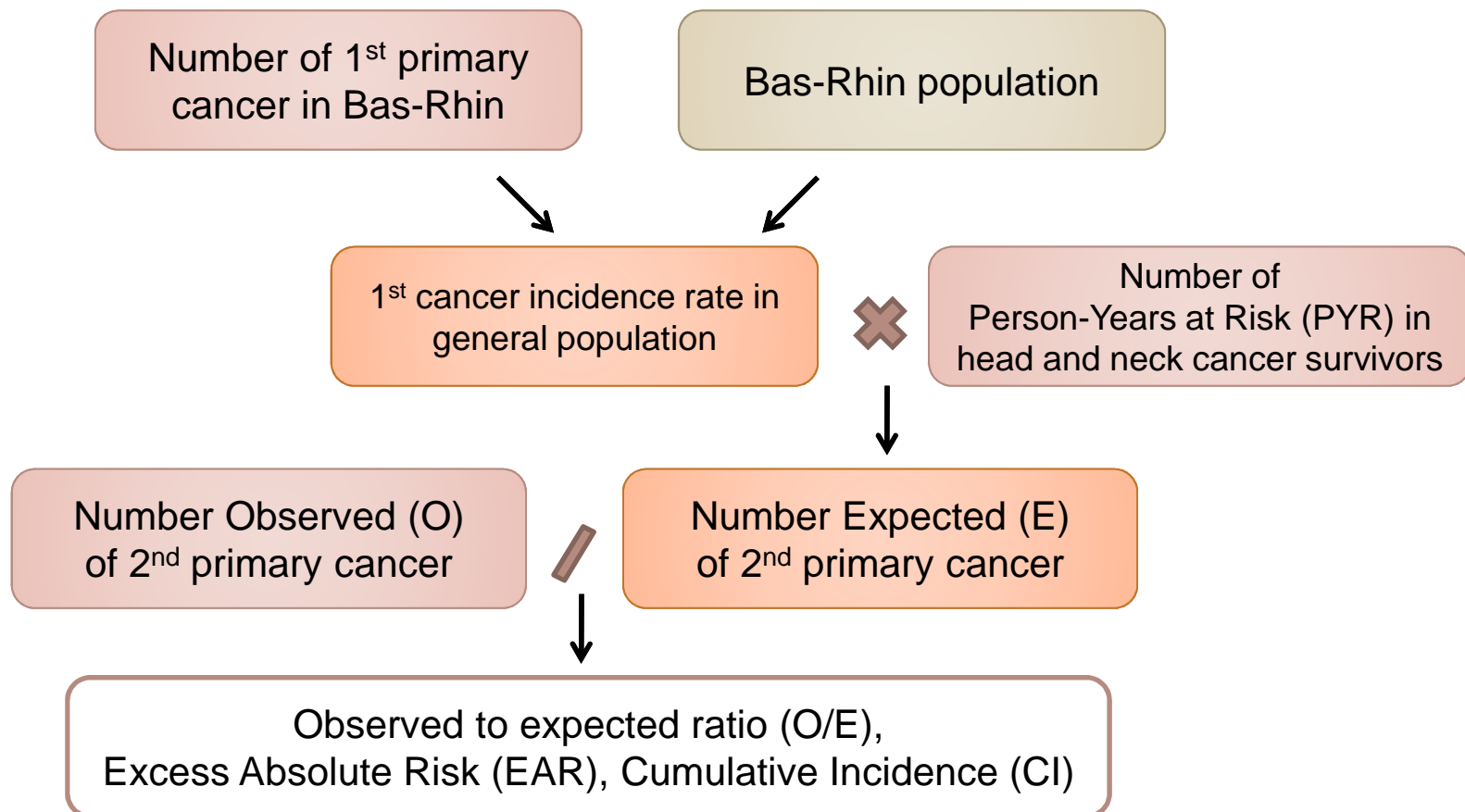
- More and more cancer survivors face the risk of developing a new primary cancer
- Risk of new cancer in cancer survivors is superior to the risk in general population<sup>1</sup>
- In Bas-Rhin, a previous analysis for all 1<sup>st</sup> cancer sites showed that men with first head and neck cancer are strongly at risk to develop new cancers<sup>2</sup>

Objective: To assess the incidence of second primary cancer among head and neck cancer survivors in Bas-Rhin, France

# Methods



- Population: men with 1<sup>st</sup> primary head and neck cancer (oral cavity, pharynx) diagnosed between 1975 and 2004 in Bas-Rhin
- 2<sup>nd</sup> primary cancer: 1<sup>st</sup> subsequent primary cancer > 2 months after 1<sup>st</sup> cancer diag.
- Indirect standardization method<sup>1,3</sup>



# Results

5,608 male patients with  
1<sup>st</sup> head and neck cancer

↓ 17,126 PYR

1,189 2<sup>nd</sup> primary cancer Observed  
(219 Expected)

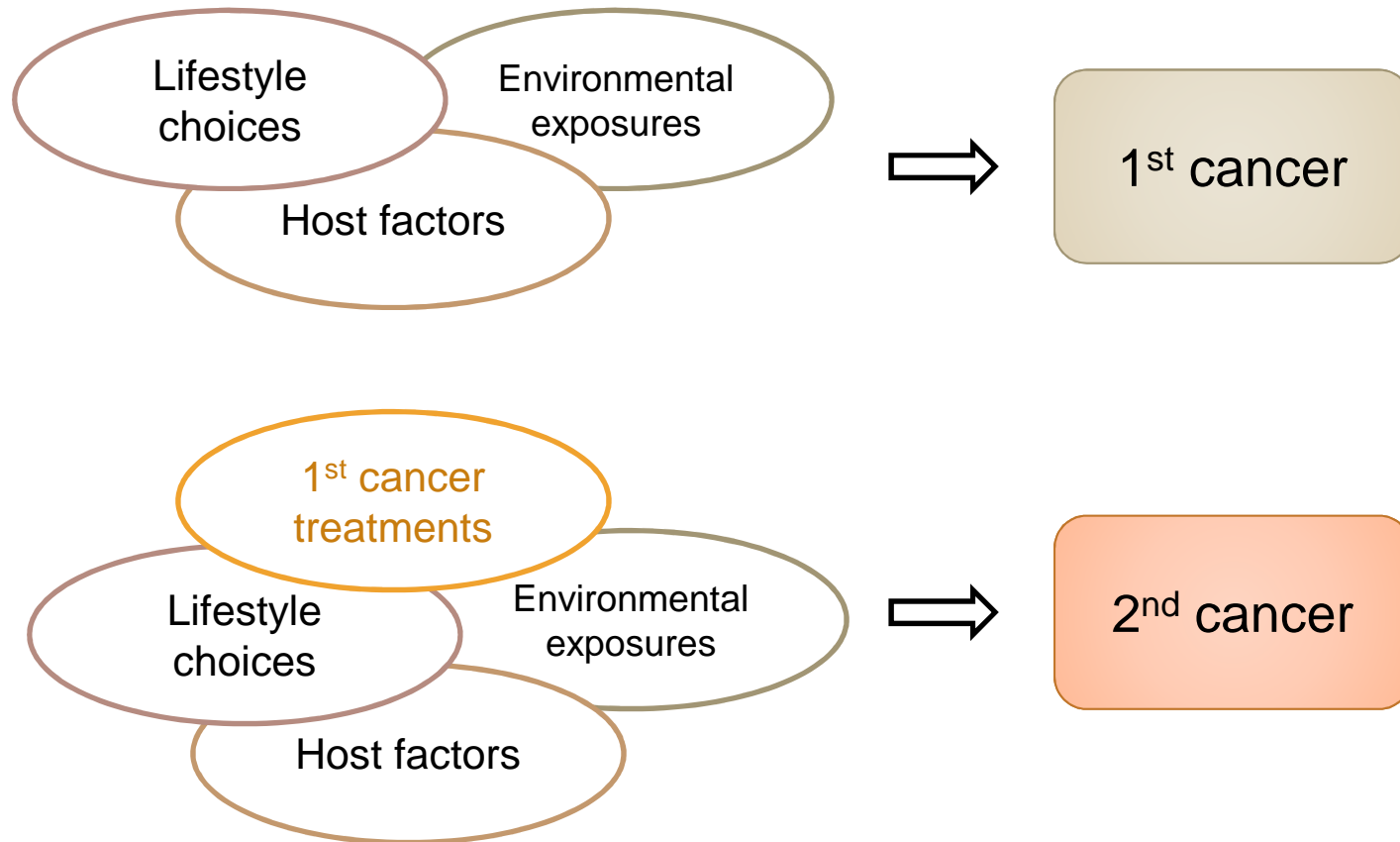
- Head and neck cancer survivors had a **5.4 relative risk** of developing a new cancer compared to the general population (O/E=5.4, 95%CI 5.1-5.8)
- The Excess Absolute Risk was of **566 additional cancer cases per 10,000 PYR**
- **18.6%** of these patients developed a 2<sup>nd</sup> primary cancer by 10 years of follow-up

- By 2<sup>nd</sup> primary cancer site:

2 <sup>nd</sup> primary cancer site	Observed	Expected	O/E (95%CI)	EAR
Head and neck	378	20	18.9 (17.0-20.9)	209
Lung, bronchus	364	37	9.8 (8.9-10.9)	191
Esophagus	165	7	23.6 (20.1-27.5)	92
Prostate	46	43	1.1 (0.8-1.4)	2
Large Bowel	46	29	1.6 (1.2-2.1)	10
Liver	30	8	3.8 (2.5-5.4)	13
Urinary bladder	17	12	1.4 (0.8-2.3)	3
Kidney, other urinary tract	15	9	1.7 (0.9-2.8)	4

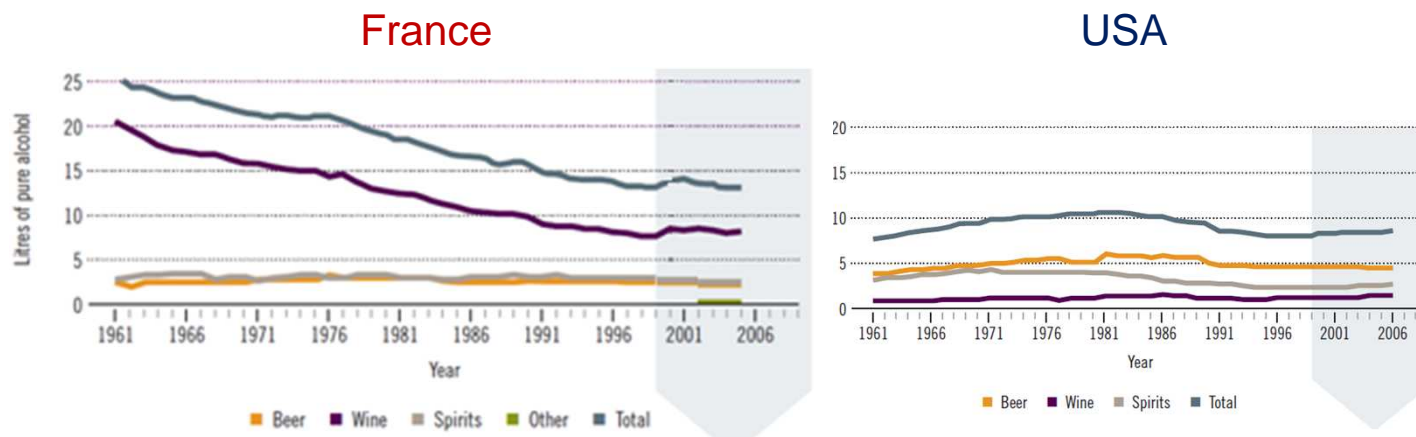
# Discussion

- How to explain the excess risk of cancer in cancer survivors ? <sup>4</sup>



2 <sup>nd</sup> primary cancer site	O/E Bas-Rhin	O/E USA (5)	EAR Bas-Rhin	EAR USA (5)
Head and neck	18.90	17.73	209	96
Lung, bronchus	9.84	3.79	191	92
Esophagus	23.57	13.9	92	33

- Alcohol consumption<sup>6</sup>



- Tobacco consumption (Smoking prevalence in men in 2006<sup>7</sup>)

France 36%

USA 25%

- Late adverse effects of treatments ?

5% of second cancers may be related to radiotherapy in head and neck cancer survivors in the USA<sup>8</sup>



# Conclusions

- Head and neck cancer survivors are strikingly at high risk to develop new tobacco and alcohol related cancers in Bas-Rhin
- Prevention strategies should be strengthened
  - Promoting smoking cessation and moderate alcohol consumption in general population
  - Lifestyle change interventions among patients with a first head and neck cancer
- Better understanding of the excess risk of second cancer is required to help clinicians and patients
  - Choice of treatment
  - Prevention strategies
  - Clinical follow-up
- Extension of this analysis to other French cancer registries  
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## Local partners

Private and public hospitals  
Pathologists  
General Practitioners

## Institutional partners



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