

Survival improvement in primary lung cancer in a 10-year period: results of the French KBP-2000-CPHG and KBP-2010-CPHG cohorts

C. Locher¹, S. Loutski², P. Le Lann³, N. Just⁴, S. Jeandeau⁵, S. Lacroix⁶, E. Goarant⁷, D. Sandron⁸, C. Mouroux-Rotomondo⁹, G. Berthiot¹⁰, P. Thomas¹¹ & M. Grivaux¹
Respiratory department of the following General Hospitals: 1-Meaux, 2-Compiègne, 3-Creil, 4-Roubaix, 5-Ste-Feyre, 6-Périgueux, 7-St-Malo, 8-St-Nazaire, 9-Antibes-Juan-Les-Pins, 10-Chalons-en-Champagne, 11-Gap — France

BACKGROUND

- Due to its high incidence and bad prognosis, lung cancer remains a major health concern.
- In France, in the 2000s, several social and scientific evolutions (e.g., changes in smoking habits, improved diagnosis methods, development of new drugs and therapeutic strategies) have changed the epidemiologic characteristics of this cancer [Locher, 2013].
- These evolutions may have changed its prognosis.

OBJECTIVE

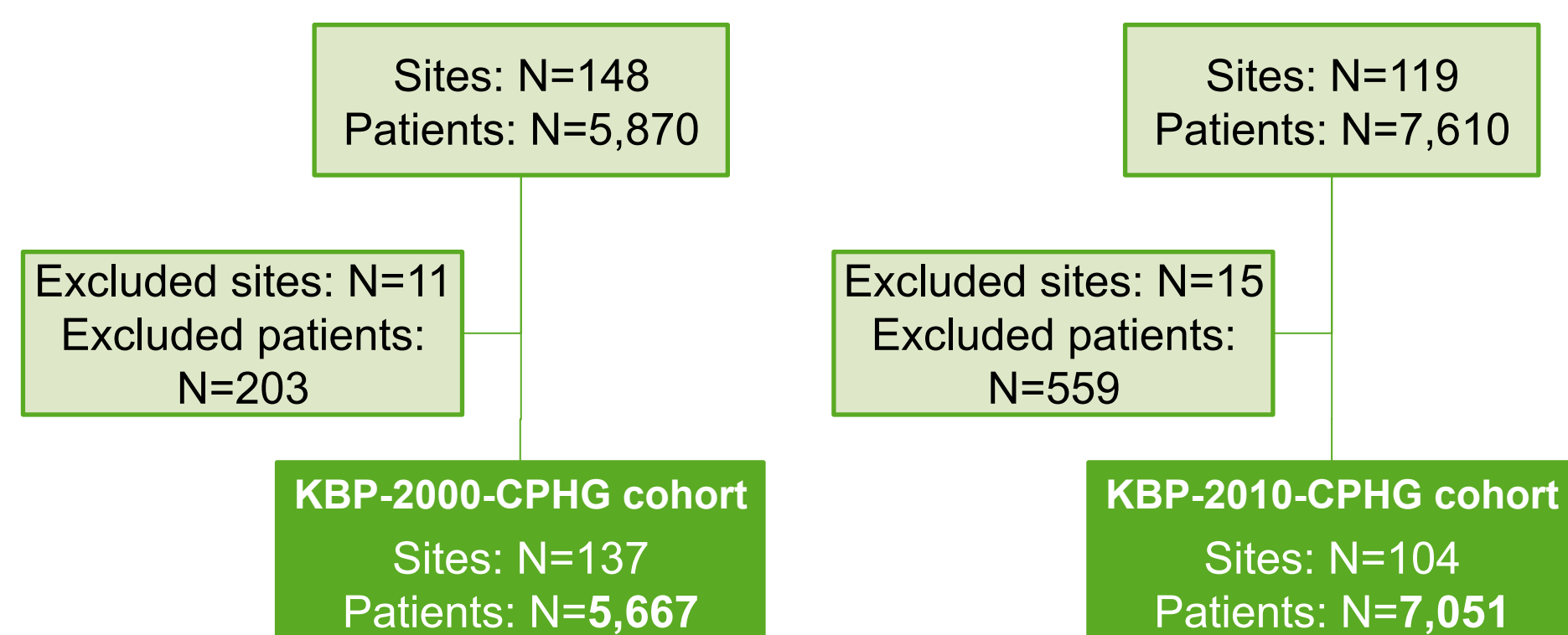
- To compare 1-year mortality in adult patients with primary lung cancer at a 10-year interval.

METHODS

- In 2000 and 2010, the French College of General Hospital Respiratory Physicians (CPHG) performed 2 prospective multicenter cohort studies: KBP-2000-CPHG & KBP-2010-CPHG.
- These studies respectively collected information on all new cases of primary lung cancer histologically or cytologically diagnosed from 01 January 2000 to 31 December 2000 and from 01 January 2010 to 31 December 2010, and followed in the respiratory department of one of the participating general hospitals.
- A standardized form was completed for each patient at inclusion.
- A steering committee checked recruitment exhaustiveness.

RESULTS

- The 2 cohorts represented about 1 in 5 lung cancers diagnosed in France in 2000 and 2010.



Main changes in patient characteristics between 2000 and 2010

Patients' characteristics		2000	2010	p value
Mean age:	(years)	64.3 +/-11.5	65.5 +/-11.3	<0.0001
Sex:	Women	16.0%	24.3%	<0.0001
Performance status:	0	26.8%	27.3%	<0.0001
	1	37.7%	41.6%	
	2	17.8%	18.4 %	
	3	14.4%	9.9 %	
Smoking status:	4	3.3%	2.8 %	<0.0001
	Current-smoker	52.5%	49.2%	
	Former-smoker	40.3%	39.9%	
	Never-smoker	7.2%	10.9 %	

Main changes in tumor characteristics between 2000 and 2010

Tumor characteristics		2000	2010	p value
Histology	SCLC	16.6%	13.7%	<0.0001
	NSCLC	83.4%	86.3%	
	Squamous cell carcinoma	46.6%	30.4%	
	Adenocarcinoma	34.9%	52.6%	<0.0001
Stade:	Stade 0 to IIB	23.0%	18.3%	<0.0001
	Stade IIIA	14.1%	14.0 %	
	Stade IIIB	20.4%	9.5%	
	Stade IV	42.6%	58.3%	

- **One-year survival is improved by ≈ 5% between 2000 and 2010 in:**
 - Both men and women
 - Non small cell lung cancer (NSCLC) and adenocarcinoma.

Mortality	2000	2010	p value (univariate analysis)
All lung cancers	61.8%	56.4%	<0.0001
Men with all lung cancers	62.4%	58.0%	<0.0001
Women with all lung cancers	58.4%	51.5%	0.001
Small-cell lung cancers	66.9%	64.2%	0.22
Non-small cell lung cancers	60.7%	55.2%	<0.0001
Adenocarcinoma	61.5%	54.4%	<0.0001
Squamous cell carcinoma	58.2%	52.9%	0.0008

- Independent risk-factors for death 1-year after diagnosis (multivariate analysis) were :

- **The year of diagnosis (2000 vs. 2010)**
- Older age, male sex, current-smoking, higher performance status and small-cell lung cancer.

Multivariate model	RR	95% CI	p value	
Year of diagnosis: 2010 vs. 2000	0.84	[0.77 – 0.91]	< 0.0001	
Age:	60-75 vs. < 60 years	1.03	[0.94 – 1.13]	0.55
	> 75 vs. < 60 years	1.53	[1.35 – 1.74]	< 0.0001
Sex:	Male vs. female	1.28	[1.15 - 1.42]	< 0.0001
PS:	1 vs. 0	2.45	[2.23 – 2.69]	< 0.0001
	2 vs. 0	6.49	[5.73 – 7.36]	< 0.0001
	3 vs. 0	15.2	[12.6 – 18.3]	< 0.0001
	4 vs. 0	39.0	[23.5 – 64.8]	< 0.0001
Smoking status:	Former vs. never-smoker	1.02	[0.87 – 1.19]	0.84
	Current vs. never-smoker	1.23	[1.05 – 1.44]	0.01
Histology: NSCLC vs. SCLC	0.83	[0.74 – 0.93]	0.002	

CONCLUSIONS

- **In 10 years, one-year mortality has decreased in French patients with primary lung cancer.**
- **The survival improvement was not solely due to epidemiological changes in patient (age, sex, smoking habits, or PS) and tumor characteristics (histological type, stage disease) over the 10-year period.**
- **This supports the hypothesis of improved management of lung cancer in patients followed up in French general hospitals.**

Reference: Locher C et al. Major changes in lung cancer over the last ten years in France: the KBP-CPHG studies. *Lung Cancer*. 2013 Jul;81(1):32-8.

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KBP-2010-CPHG

