

# Characterization of clinical features, treatment and health care costs of non-small cell lung cancer (NSCLC) patients in Finland

## A retrospective register study

This is a **retrospective register study** on the characteristics of the patient population diagnosed with Non-Small Cell Lung Cancer (NSCLC) 2014- 2018, as well as the development of treatment practices and related specialised care costs.

Data was collected from 5 university hospitals in Finland: Helsinki University Hospital (HYKS), Tampere University Hospital (TAYS), Kuopio University Hospital (KYS), Oulu University Hospital (OYS) and Turku University Hospital (TYKS).

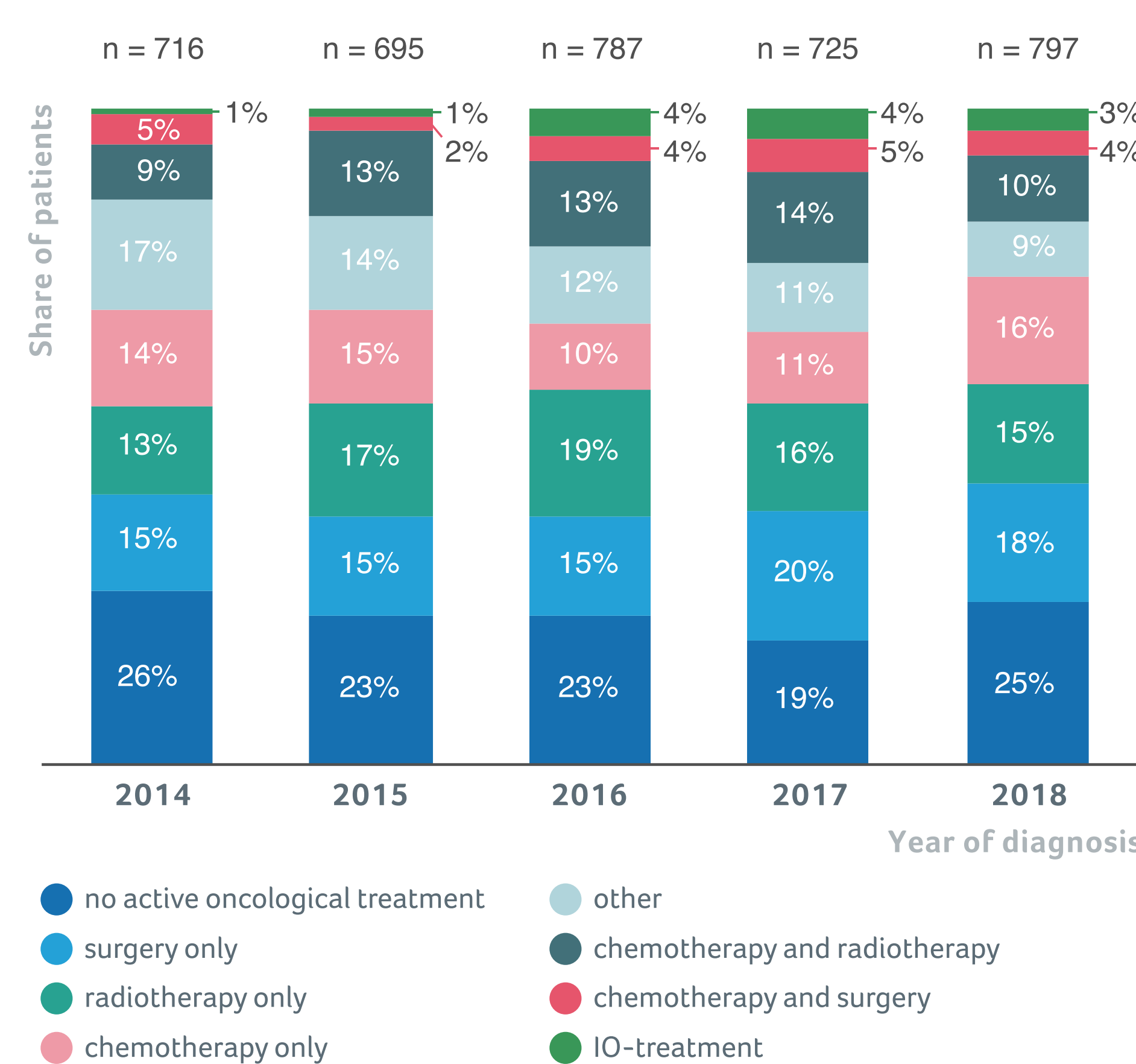
Patients diagnosed with NSCLC (C34.X1-5) between 2014-2018 (3720 patients) were included in the study. All data was collected from hospital electronic records. Both structured and unstructured data was used.

**Table 1 Patient NSCLC diagnosis distribution grouped by the year of diagnosis**  
(includes: HYKS, KYS, TAYS, TYKS, OYS)

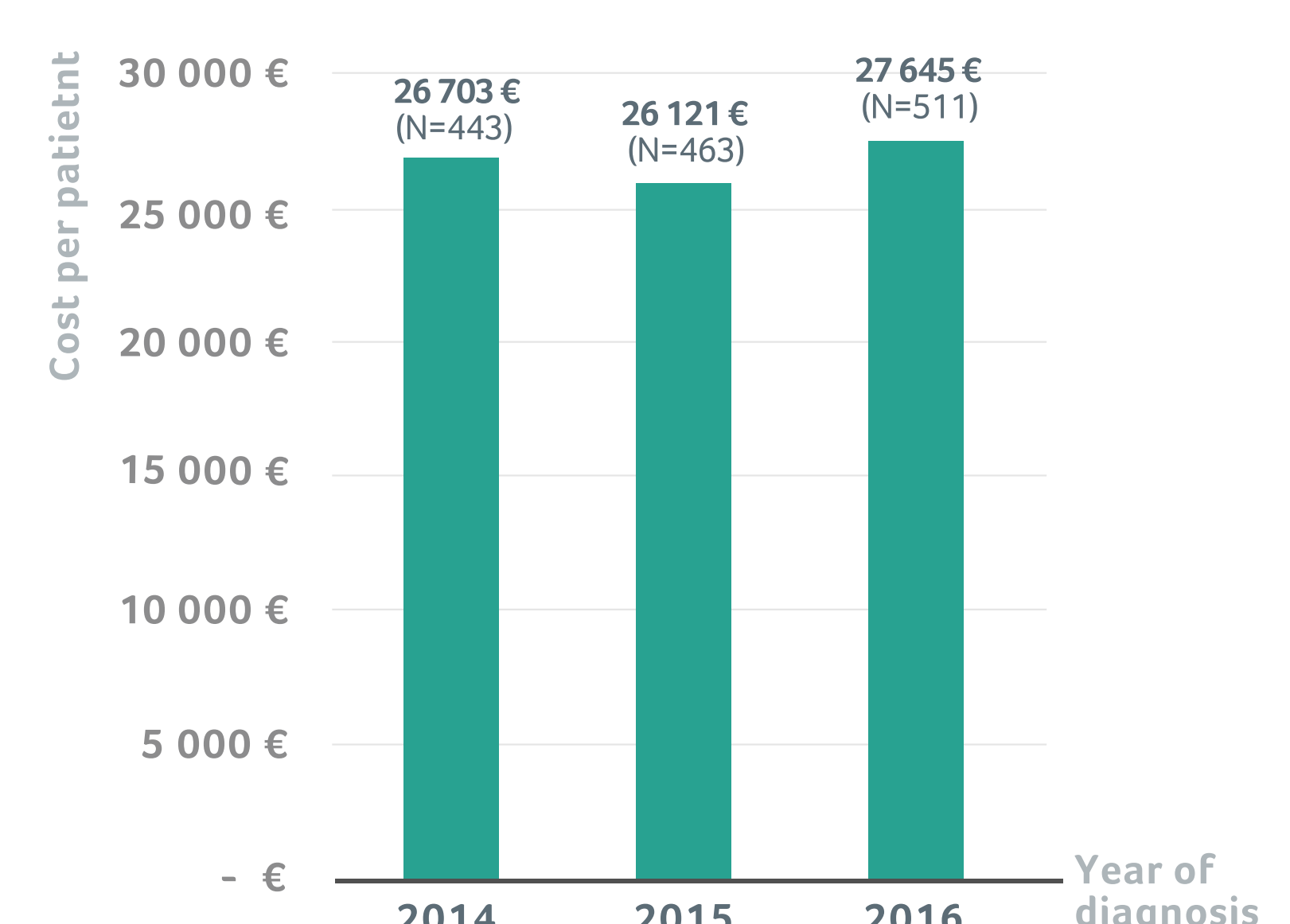
Patient profile Diagnosed patients (n)	2014 716	2015 695	2016 787	2017 725	2018 797	2014-2018 3720
adenocarcinoma	53%	52%	53%	54%	54%	53%
squamous cell carcinoma	42%	45%	43%	43%	42%	43%
large cell carcinoma	3%	0%	1%	1%	1%	1%
other non-small cell carcinoma	3%	2%	3%	3%	2%	3%

**Table 2 Patient profiles for patients for whom the data could be found, grouped by the year of diagnosis**  
(includes: HYKS, KYS, TAYS, TYKS)

Patient profile Diagnosed patients (n)	2014 614	2015 610	2016 691	2017 629	2018 691	2014-2018 3235
Stage (n)	117	129	187	207	274	912 (28%)
I	13%	13%	14%	20%	17%	16%
II	16%	11%	10%	13%	11%	12%
III	14%	23%	26%	22%	23%	22%
IV	57%	53%	50%	45%	49%	50%
ECOG (n)	139	145	197	194	269	944 (29%)
0	25%	16%	19%	23%	22%	21%
1	41%	51%	45%	53%	46%	47%
2	23%	19%	24%	15%	20%	20%
3	9%	12%	11%	9%	10%	10%
4	2%	2%	2%	1%	2%	2%
PD-L1 (n)	11	16	60	161	307	556 (17%)
strong pos. (≥ 50%)	54%	28%	31%	28%	32%	31%
weak pos. (1-49%)	23%	17%	31%	25%	38%	32%
pos., undefined	0%	6%	1%	3%	1%	2%
negative (< 1%)	23%	50%	37%	44%	29%	35%



**Figure 1 Treatment combination by year of diagnosis**  
(includes: HYKS, KYS, OYS, TAYS, TYKS)



**Figure 2 Average total cost (in normal prices\*) over the whole treatment period per patient for the grouped cohorts by the year of diagnosis. Includes all patients diagnosed with NSCLC in the respective year regardless of whether treatments are still ongoing after 31.12.2018. (includes: HYKS, KYS, TAYS)**

\* Annual inflation was between -0.2% and 1.2% during 2014-2018.

## Changes in treatment types

Out of the study population, 53% were diagnosed with adenocarcinoma, and 43% with squamous cell carcinoma. For the patients for whom data on the stage of disease could be found in the patient records at the time of diagnosis (28% of the patients); 50% were identified with stage IV, 22% stage III, 12% stage II, and 16% stage I. The performance status was identified for 29% of the population. Amongst these, ECOG 1 represented the largest share with 47%, followed by 20% ECOG 2, 10% ECOG 3, 21% ECOG 0 and 2% ECOG 4.

The share of patients who received no active treatment was on average 23%. The share of patients who received only surgery increased from 15% in 2014, to 18% in 2018. The share of patients who received IO-treatment increased from 0,5% in 2014, to 3,4% in 2018. A decrease could be detected for other treatment combinations ("other") with 17% in 2014 and 9% in 2018.

## Changes in costs

There seems to be no significant change in the total cost per patient over the whole treatment period for patients diagnosed in 2014-2016. Average total cost over the whole treatment period per patient (diagnosed 2014- 2016) is € 26 800. However, a longer time period is needed to verify this, since it is possible that some patients return to the hospital in 2019, to receive further treatment.

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