

The Burden of Metastatic or Inoperable HER2+ Breast Cancer on the Italian Health System

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BACKGROUND AND AIMS

Breast cancer (BC) is the most commonly diagnosed cancer. BC with amplified levels of human epidermal growth factor receptor-2 (HER2+) accounts for around 15% of BC cases [1].

AIMS

To identify women with inoperable or metastatic HER2+ BC in Italy, and assess:

- ❖ Comorbidities and overall survival;
- ❖ Integrated healthcare costs, from the perspective of the Italian National Health Service (INHS).

METHODS

This observational retrospective analysis was performed through the Fondazione Ricerca e Salute (ReS) database, as follows:

Inclusion criteria

- Female sex, ≥ 18 y.o.
- In-hospital BC diagnosis AND chemo/radiotherapy (excl. other primary tumors) + HER2+BC (supply of trastuzumab, trastuzumab emtansine, lapatinib)
- New in-hospital diagnosis of metastasis (metastatic) OR newly BC diagnosed in 2017 and without any mastectomy within 12 months after the index date (inoperable)

Study Design

- Accrual period: January to December 2017
- Index date: diagnosis of new metastatic or inoperable HER2+BC
- Follow-up: up to 2 years from the index date (until 31 December 2019)

Analyses

- Age and comorbidities (until 2013)
- 1-year healthcare resources consumption (pharmaceutical, hospitalization, outpatient specialist care)
- Overall survival (Kaplan Meyer curves) up to 2 years after the index date
- Healthcare costs charged to the INHS

RESULTS

Identification of women with new metastatic or inoperable HER2+BC

ReS population in 2017 (~ 5 mln inhabitants):
women with BC: 5,058

Patients with HER2+BC: 615 patients
(12.2% of women with BC)

Patients with metastatic or inoperable HER2+BC in 2017: 198 patients

Trastuzumab as 1st-line therapy
N = 159

Mean age: 57 \pm 12
Median age 57 (48;66)

Other 1st-line therapy (excl. trastuzumab)
N = 16

Mean age: 57 \pm 11
Median age 57 (51;62)

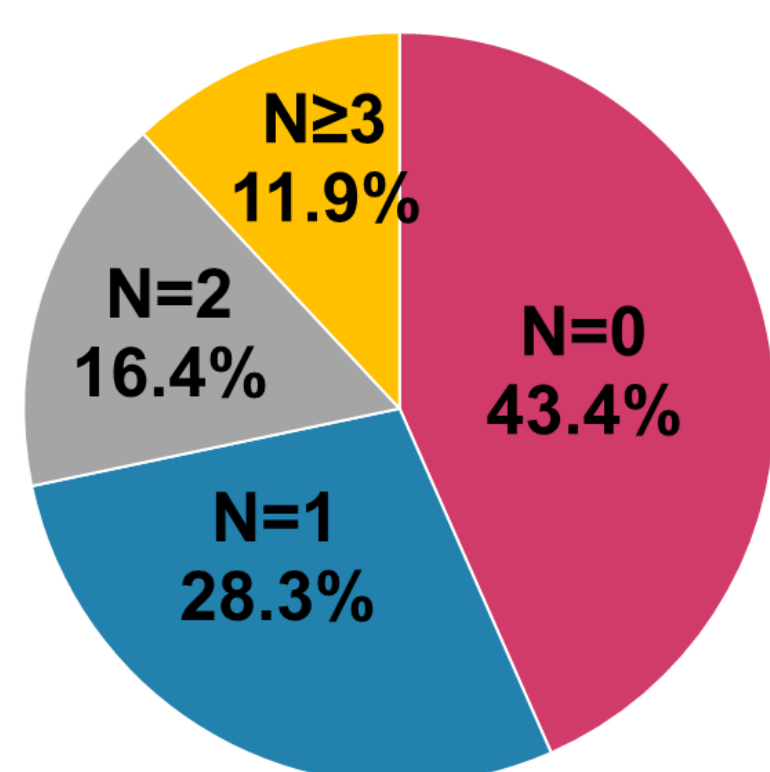
Non-treated with chemotherapy
N = 23

Mean age: 65 \pm 13
Median age 68 (53;77)

Baseline and previous comorbidities

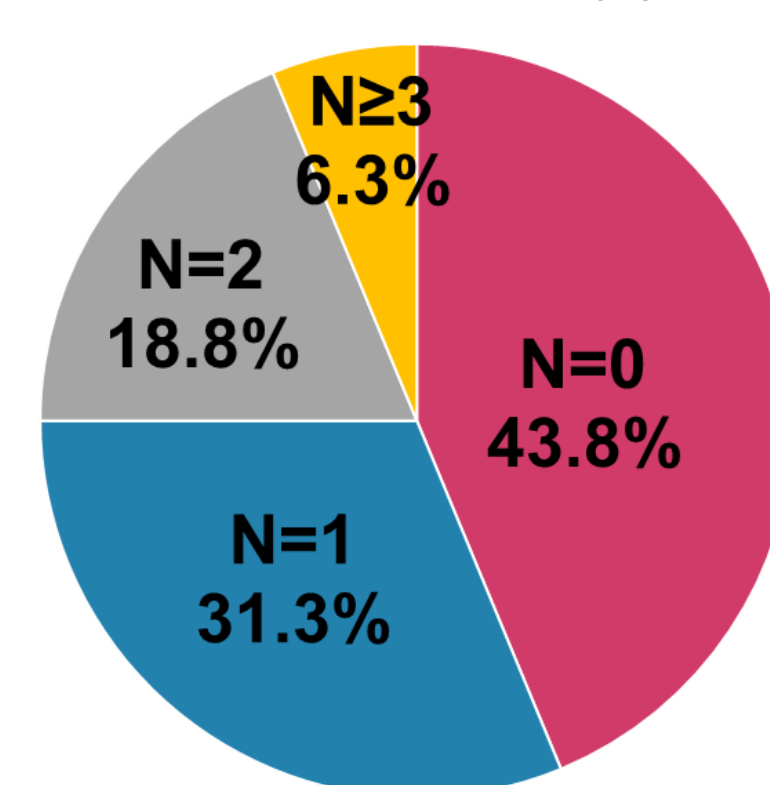
(hypertension, dyslipidemia, chronic lung/liver/renal/rheumatologic diseases, diabetes, coronary artery/cerebrovascular diseases, heart failure)

Trastuzumab 1st-line

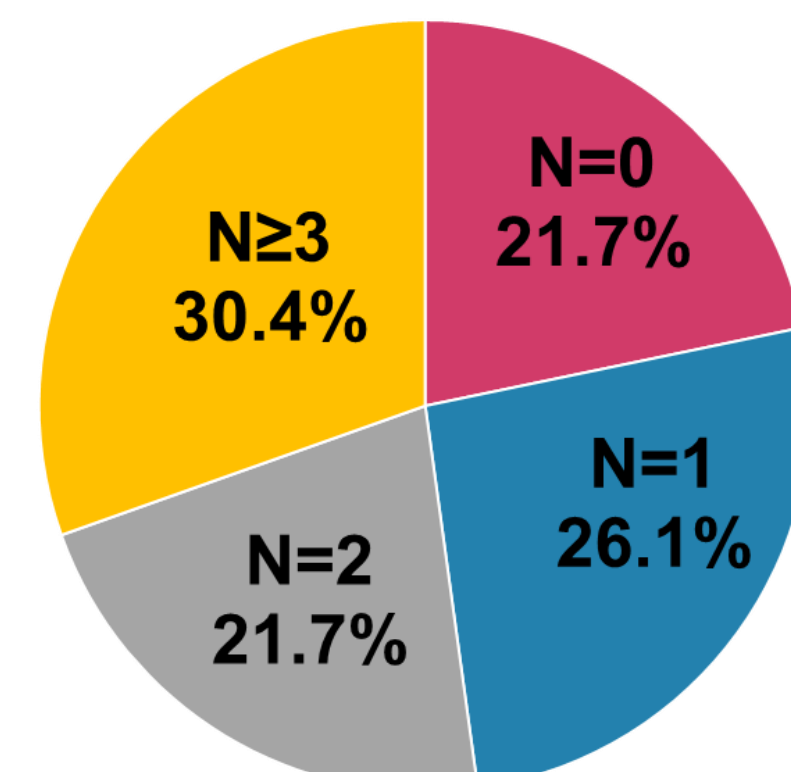


Percentage distribution of patients with 0, 1, 2 or ≥ 3 comorbidities, by the treatment group

Other 1st-line chemotherapy



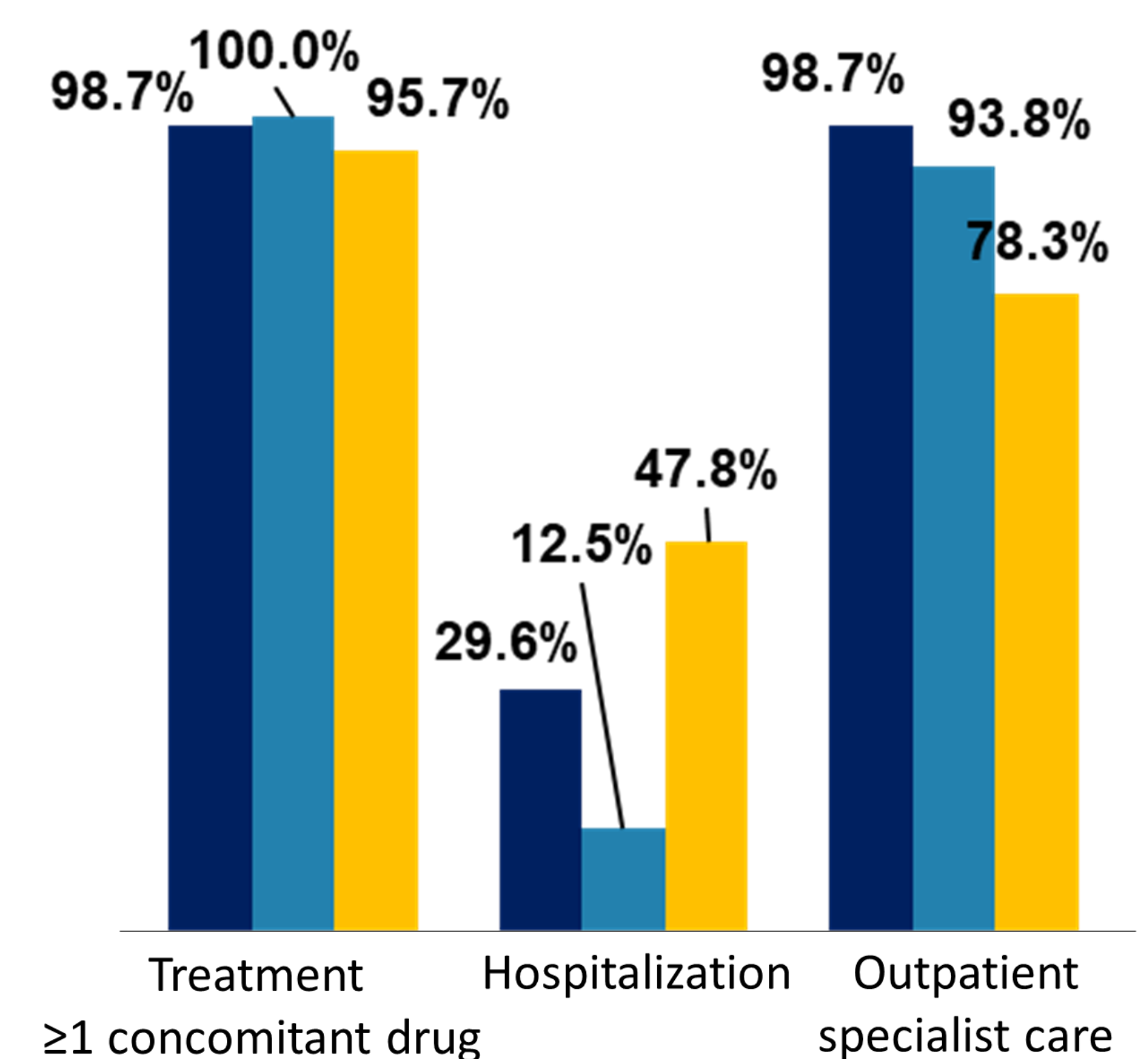
No chemotherapy



Hypertension and dyslipidemia are the most common.

Healthcare resource consumption

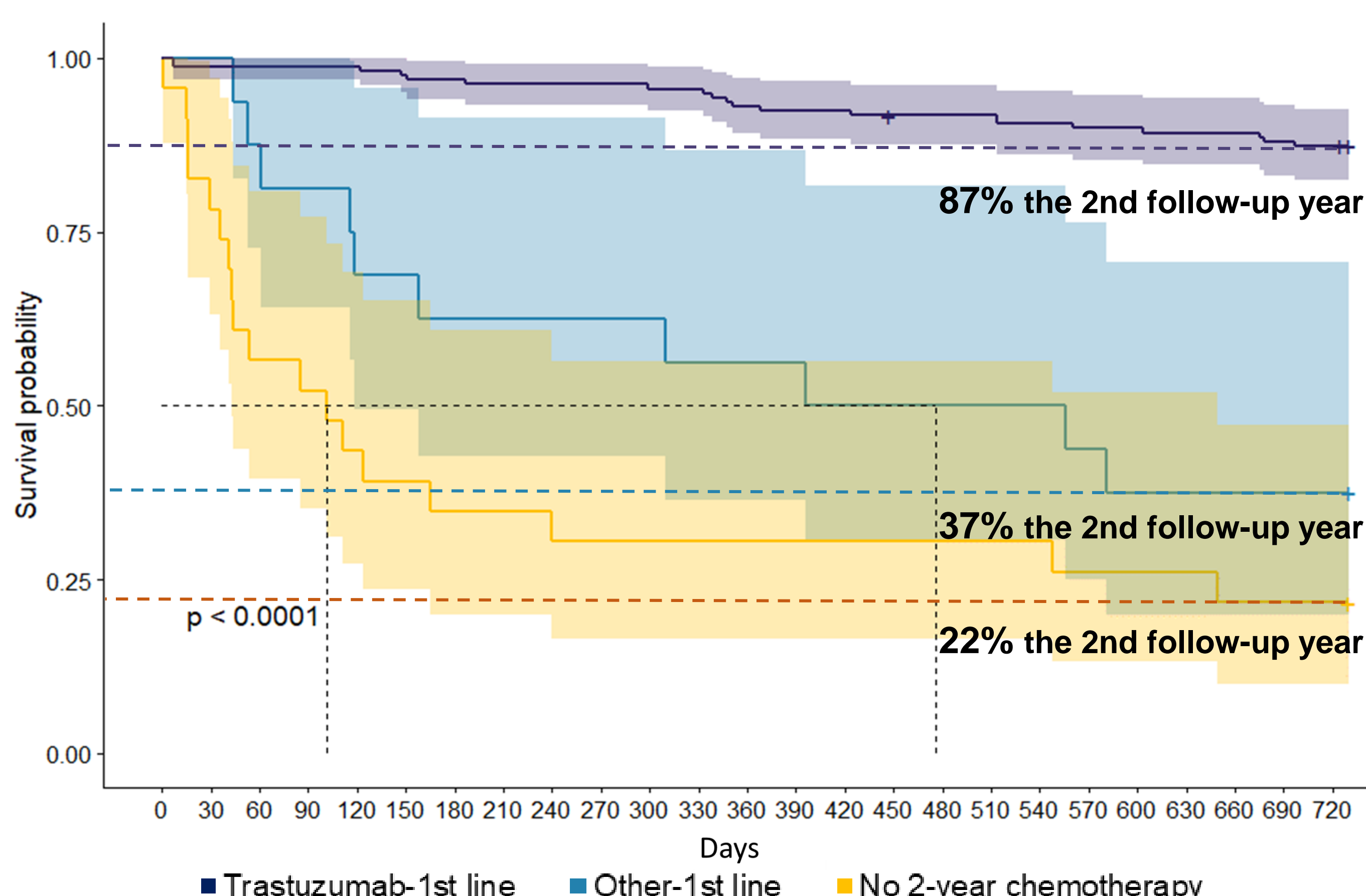
Patients (%) who benefit from a healthcare resource consumption charged to the INHS, within 1-year follow-up, by the treatment group



■ Trastuzumab-1st line ■ Other-1st line ■ No 2-year chemotherapy

Overall survival within 2 years of follow-up

2-year overall survival (Kaplan Meyer curves), by treatment group



Integrated healthcare costs

Administrative flow	Trastuzumab-1st line		Other chemotherapy		No chemotherapy	
	1° year follow-up	2° year follow-up	1° year follow-up	2° year follow-up	1° year follow-up	2° year follow-up
Pharmaceuticals	1,114 €	475 €	2,072 €	1,635 €	396 €	287 €
Hospitalizations	5,320 €	1,536 €	3,828 €	992 €	5,501 €	587 €
Outpatient specialist care	2,947 €	1,566 €	2,843 €	2,557 €	1,136 €	782 €
Chemotherapy (all flows)	51,673 €	89,160 €	10,086 €	11,865 €	0 €	0 €
Total	61,054 €	92,738 €	18,829 €	17,048 €	7,033 €	1,656 €

CONCLUSIONS

Despite the limitations due to the exclusive use of administrative healthcare data, a slightly underestimated prevalence of women with BC-HER2+ was found, and the high burden of this condition on the INHS, in terms of comorbidities and healthcare resource consumption and costs, was confirmed.

[1] Schlam I, et Al., Overcoming Resistance to HER2-Directed Therapies in Breast Cancer. *Cancers (Basel)*, 2022 Aug 18;14(16):3996.

