Hospital management and costs of unresectable/locally advanced or metastatic esophageal cancer in France (OCCASION study)

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François E [1], Bensimon L [2], Cagnan L [2], Mackosso C [2], Levy-Bachelot L [2], Lafon T [3], Schmidt A [3], Vainchtock A [3]

[1] Centre Antoine Lacassagne, Nice, France
[2] MSD France, Puteaux, France
[3] HEVA, Lyon, France

Introduction

In France, 5,448 new cases of esophageal cancer were reported in 2018, mainly among men (78%) [1].

Healthcare resource use incurred by patients with metastatic esophageal cancer has been estimated in a few studies and mostly outside of France and no data is available on unresectable/locally advanced or metastatic esophageal cancer patients.

In this context, a study was set up from the French administrative databases.

Objectives

To describe hospital resource utilization and costs for the management of patients with unresectable/locally advanced or metastatic esophageal cancer, eligible for a first-line treatment.

Methods

An observational retrospective study was conducted using the French exhaustive national hospital discharge database (PMSI). Study population was identified through an algorithm based on expert inputs and combining criteria as ICD-10, surgery codes, treatment duration and stays in palliative care.

Study period

Patients were included on a 2-year period in 2015 and 2016. A prospective follow-up over this study period was performed to assess hospital management and treatment.

Inclusion criteria

Adult patients (≥18 years old) with at least one hospital stay with an ICD-10 code as Main Diagnosis, Related Diagnosis or Significant Associated Diagnosis corresponding to esophageal cancer (C15* Malignant neoplasm of oesophagus excluding C152 Abdominal part of oesophagus).

Exclusion criteria

Patients with surgery and without metastasis (C77* Secondary and unspecified malignant neoplasm of lymph nodes, C78* Secondary malignant neoplasm of respiratory and digestive organs, C79* Secondary malignant neoplasm of other and unspecified sites).

Additionally, patients considered too weak to receive systemic anti-cancer therapy were excluded:

- Patients with a treatment discontinuation in the 2-month period after the first chemotherapy (ICD-code Z511 Chemotherapy session for neoplasm),
- Patients with at least one passage through palliative care.

Outcomes

Treatment lines were defined in accordance with experts and literature as:

- First line for the 0-6 months period after patient identification,
- Second line for the 6-10 months period,
- Third line for the 10 months and over period.

A 42-day and over gap between 2 chemotherapies were also considered as a treatment line switch.

Chemotherapy and radiotherapy sessions were identified through ICD-10 codes and respectively.

Hospital stays of patients were classified as follows:

- Chemotherapies, identified through (ICD-10 code Z511 Chemotherapy session for neoplasm),
- Radiotherapies, identified through (ICD-10 codes Z510 Radiotherapy session),
- All other stays of patients (hospitalization for other reasons).

Costings were restricted to direct in-hospital costs and determined from (i) the perspective of the French social security system, according to the methodological rules of the French Technical Agency for Information on Hospitalization [3,4] and from (ii) the collective perspective, according to the French Cost study [5]. Costs were expressed in €2019.

Conclusion

This study showed that only 50% of patients with unresectable/locally advanced or metastatic esophageal cancer were eligible to receive a treatment and only 20% received at least one chemotherapy session.

From NHI perspective, mean cost was €633.68 per chemotherapy session, €270.41 per radiotherapy session and €2,549.48 per other type of stay.

References

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Acronymes

NHI National Health Insurance
PMSI Programme de Médicalisation des Systèmes d'Information
ICD-10 International Classification of Diseases 10th Revision

Disclosures

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PMSI databases were provided by ATIH. Data controller: MSD. Processing implementation officer: HEVA. Study registered under MR006 with INDS the 18/02/2019 (Declaration of conformity n°2206271 v0 of 05/09/2018).

9,799
Metastatic or unresectable/locally advanced esophageal cancer adults eligible to a new treatment

4,032
Patients with at least one chemotherapy

First line	Second line	Third line
59,009 stays	22,832 stays	11,011 stays
3,962 patients	1,225 patients	351 patients

Number of stays

Chemotherapy

	First line		Second line		Third line	
Total	27,762 stays, 47.0%	2,970 stays including expensive drug, 5.0%	15,407 stays, 67.5%	2,119 stays including expensive drug, 9.3%	8,670 stays, 78.7%	2,314 stays including expensive drug, 21.0%
Day hospitalisation	24,683 stays	41.8%	14,619 stays	64.0%	8,487 stays	77.1%
Hospitalisation	3,079 stays	5.2%	788 stays	3.5%	183 stays	1.7%

Radiotherapy

First line		Second line		Third line	
19,746 stays	33.5%	3,221 stays	14.1%	712 stays	6.5%

Other stays*

First line		Second line		Third line	
11,501 stays	19.5%	4,204 stays	18.4%	1,629 stays	14.8%

Mean Costs

Chemotherapy

	First line NHI	First line Collective	Second line NHI	Second line Collective	Third line NHI	Third line Collective
Total	€633.68 ±994.93	€ 1,037.53 ±683.68	€595.62 ±610.77	€970.22 ±387.06	€754.22 ±746.37	€936.86 ±230.52
Day hospitalisation	€501.43 ±426.69	€934.58 ±112.34	€541.95 ±506.57	€932.48 ±92.68	€740.45 ±732.44	€924.40 ±91.08
Hospitalisation	€1,693.86 ±2,490.33	€1,862.80 ±1,829.56	€1,591.32 ±1,219.84	€1,670.35 ±1,496.39	€1,392.46 ±1,047.02	€1,514.71 ±1,338.48

Radiotherapy

First line NHI	First line Collective	Second line NHI	Second line Collective	Third line NHI	Third line Collective
€270.41 ±351.05	€208.51 ±422.41	€302.93 ±340.48	€217.75 ±275.61	€489.84 ±934.95	€355.47 ±957.29

Other stays*

Fist line NHI	Fist line Collective	Second line NHI	Second line Collective	Third line NHI	Third line Collective
€2,549.48 ±4,203.05	€3,092.84 ±4,086.57	€2,432.29 ±3,671.66	€2,950.43 ±3,964.92	€2,091.55 ±2,799.52	€2,680.56 ±3,598.12

* Hospital says excluding chemotherapies and radiotherapies.