

Estimating the impact of tumours of the oesophageal and gastro-oesophageal junction on work, leisure and household activity times: evidence from a patient survey in Switzerland

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Objectives

- To describe demographics and clinical characteristics of patients with esophageal and gastro-oesophageal junction cancer.
- To estimate the indirect costs of oesophageal and gastro-oesophageal junction cancers in Switzerland.
- To assess the proportions of indirect costs attributable to reduced paid work, informal care and reduced time for leisure activities and household chores.

Methods

- The study design combines a non-interventional observational survey with literature-based modelling.
- The survey instrument was adapted from the Productivity Cost Questionnaire (iPCQ) of the Institute for Medical Technology Assessment (iMTA).
- The survey captured patients’ time lost from paid work, leisure activities and household chores, and informal care provided to the patients during the last four weeks.
- Participating clinical centres recruited patients and provided medical information.

Eligibility criteria

- Age at least 18 years and residing in Switzerland
- In consultation or treatment in one of the participating clinical centres
- Diagnosed with adenocarcinoma or squamous cell carcinoma of the oesophagus (GE) or adenocarcinoma of the gastroesophageal junction (GEJ) at least 3 months before being contacted for the study
- Consent to participate in the study.
- Capable to complete the survey in French, German or Italian.

Estimation of costs

- Indirect costs were calculated as the product of the time lost for each cost item and the associated unit cost (Table 1).
- Lifetime costs were calculated as the product of monthly mean costs for each cancer stage and time spent in each stage (1)
- Cost of premature mortality was estimated separately from literature data.

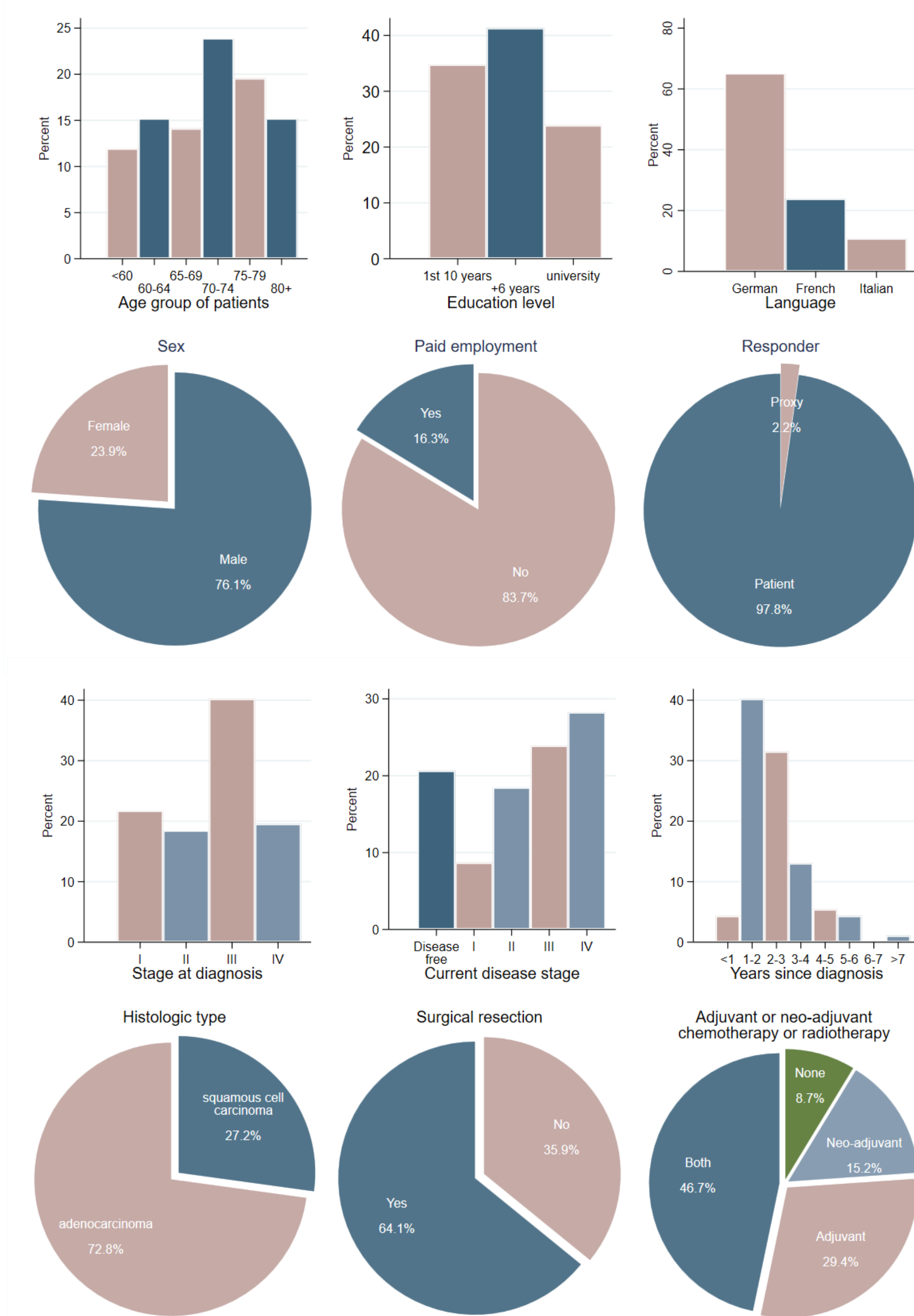
Table 1. Unit costs for Switzerland

Unit cost	Value	Source
Work time <i>(for patients with paid employment)</i>	Female 50-64 years: CHF 39 per hour	Swiss Federal Statistical Office (2)
	Male 50-44 years: CHF 46 per hours	
Informal care	CHF 38 per hour	Pacheco Barzallo et al. (3)
Leisure time	CHF 27 per hour	Verbooy et al, adjusted by purchasing power parity and inflation to Swiss 2022 values (4)
Household chores time		

Results

- Target sample is 120 (recruited through 7 clinical centers).
- Here we report an interim analysis of the first 92 participants, looking at the costs for both GE and GEJ combined.
- Figures 1 present the main demographic and clinical characteristics of these 92 patients.
- Most patients are no longer working, male and in disease stage III or IV.

Figure 1. Demographic and clinical characteristics of the study participants (n=92)



- Independent of disease stage, most patients reported no impact of the cancer or its treatment on work or leisure time (Table 2 and Figure 2).
- The impact on leisure time was mostly reported, the highest indirect cost was estimated for work productivity (Table 2).
- The median estimated indirect cost for those impacted is CHF 1944 per patient.
- The highest costs were observed in patients at advanced disease stages (Figure 3).
- The estimated indirect cost over the patients’ lifetimes is CHF 62,648 per patient and considered work, leisure, unpaid work, informal care.
- The estimated discounted cost of premature mortality is CHF 509,064 per patient and only includes work-related cost.

Table 2. Impact of oesophageal cancer and treatment over a 4 week period

Item	n	Impact		Cost in CHF for those impacted		
		Yes	No	Mean	Median	SD
Work productivity	92	17.4%	82.6%	3520	2367	3490
Informal care	92	15.2%	84.8%	1965	1368	2104
Leisure time	91	24.2%	75.8%	1477	972	1215
Household chores	90	16.7%	83.3%	1267	756	1479
Any of the above	92	30.4%	69.6%	4113	1944	4305

Figure 2. Distribution of indirect costs of oesophageal cancer and gastro-oesophageal junction cancer during a 4 week period in CHF

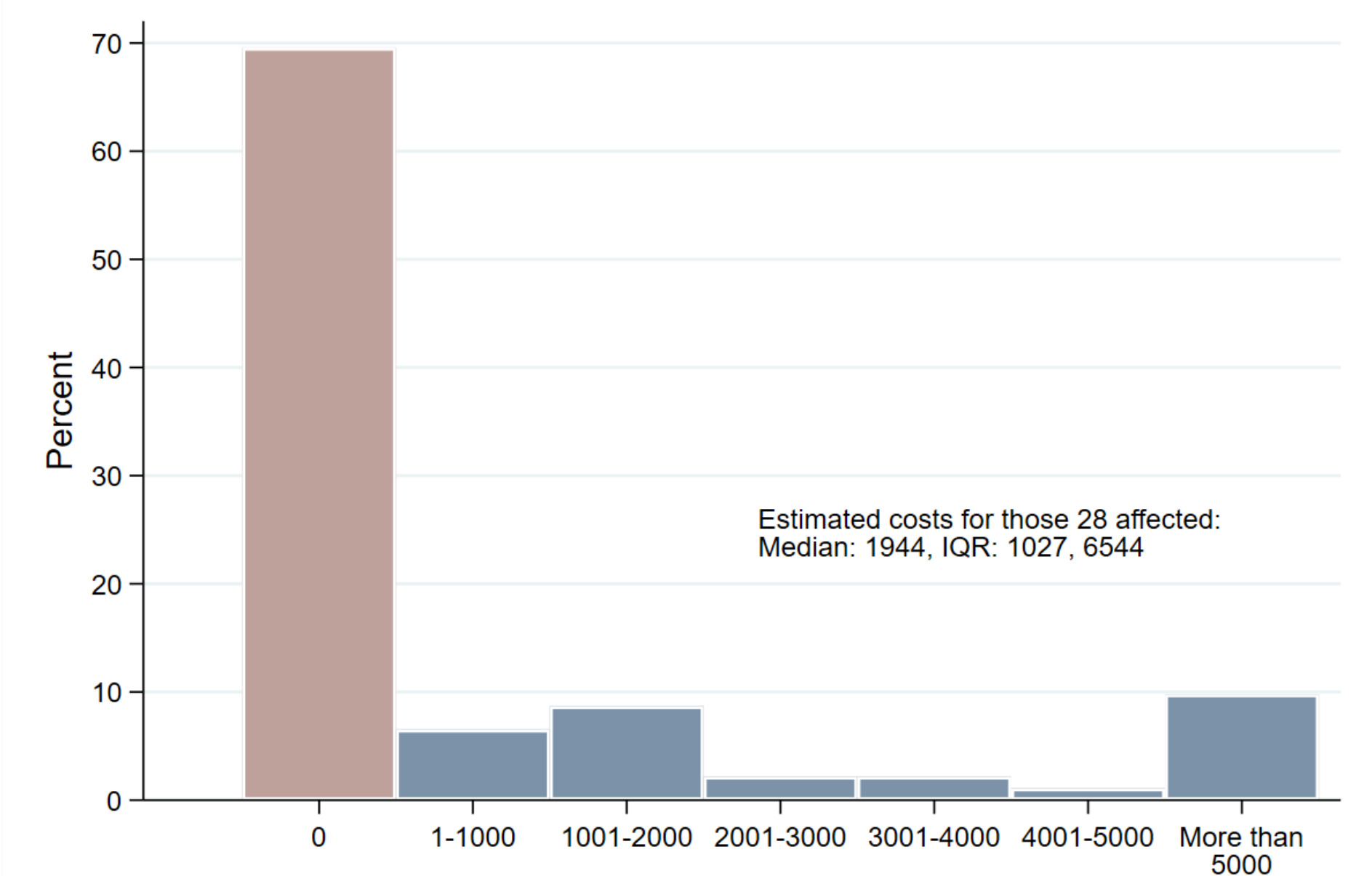
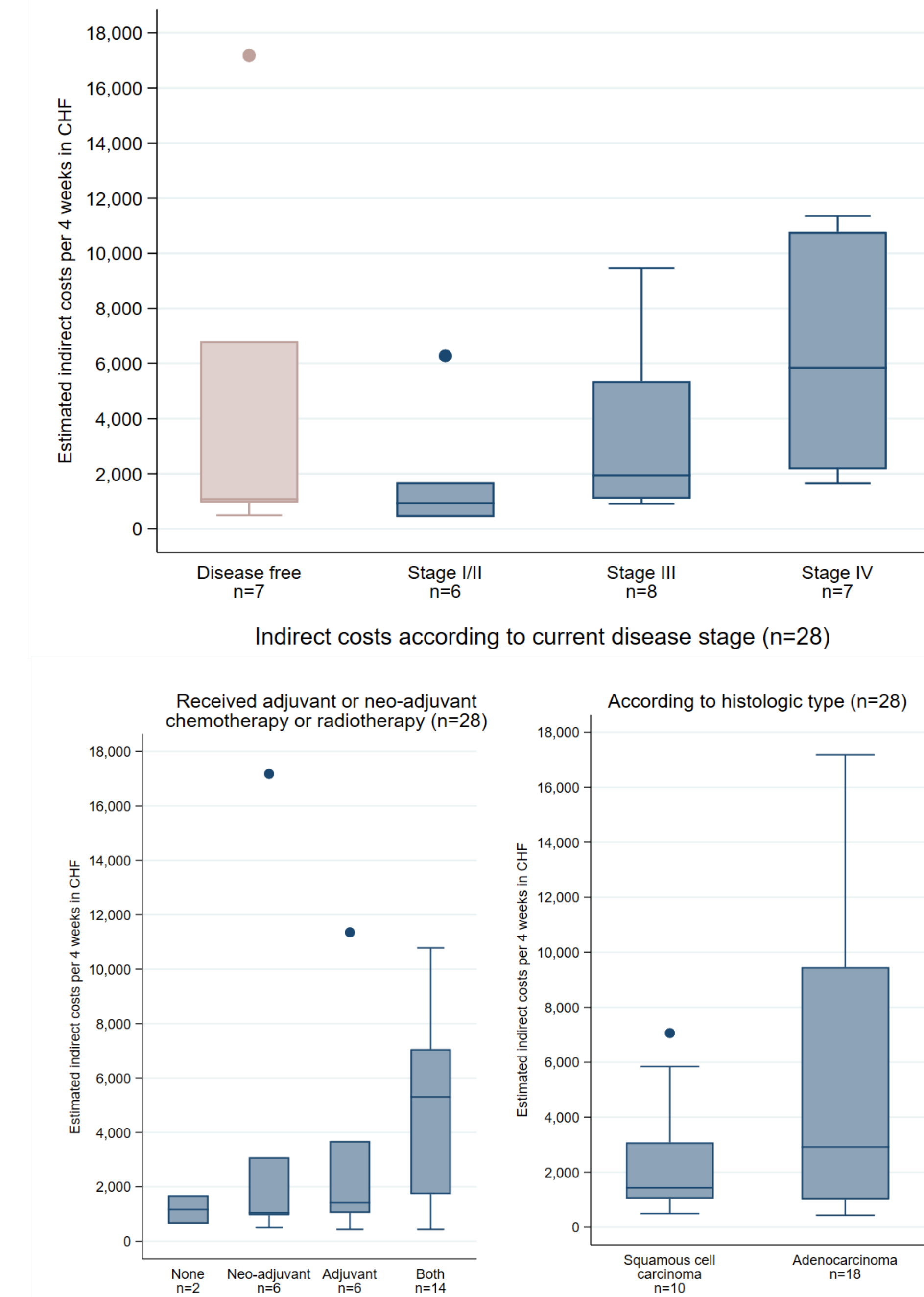


Figure 3. Indirect costs for those reporting an impact according to disease stage, adjuvant, neo-adjuvant therapy and histologic type (n=28)



Conclusion

- Our study is the first to monetize the impact of oesophageal and gastro-oesophageal junction cancer on the personal and professional activities of Swiss patients and their informal caregivers.
- Most patients had not a paid employment and didn’t report an impact of the cancer and treatment on their work or daily life.
- The estimated indirect costs for those impacted (driven by work productivity) are significant and seem to vary across disease stages.
- Possible selection effects will be evaluated once data collection is completed.

References

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