

Burden of diffuse large B-cell lymphoma (DLBCL) in Germany – A retrospective statutory health insurance claims data analysis

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Introduction

For diffuse large B-cell lymphoma (DLBCL) limited information on epidemiology, hospitalisation, costs, and outcomes in Germany (inpatient/ outpatient) has been published. Objective of this study was to provide information to fill aforementioned gaps.

Methods

This retrospective cohort study (2015-2020) is based on anonymized, longitudinal German statutory health insurance claims data, [InGef database; the sample (size: ~3.3Mio) is representative for the German population]. Inclusion criteria: ≥18 years, inpatient/ outpatient diagnosis DLBCL (ICD C83.3).

Results

- The absolute number of prevalent DLBCL patients (pts) was n=1.437 in 2020; n=1.205 patients in 2015. (Figure 1)
- In this cohort the relative prevalence was 44,6 per 100.000 in 2020; 36,8/100.000 in 2015.
- Age and sex did not change over 5 years; mean 68,6 years (SD±13,6), 55,6% male.
- There were no differences in TOP-5 outpatient prescriptions of antineoplastic and immunomodulating agents (ATC L):
 - Rituximab
 - Cyclophosphamid
 - Doxorubicin
 - Vincristin
 - Pegfilgrastim
- In the period 2015-2020 certain characteristics on hospitalized pts, number and length of hospitalization were documented annually:
 - Propotion of pts with at least one hospital stay: 78%
 - Mean number of admission per year: 3 [per patient(ppt); SD±3]
 - Mean cumulative duration of hospital stay: 29,3 days ppt (SD±47,5)
 - The annual rates remained stable over the observation period
- Mean annual costs in 2020 were €24.101 ppt (median 10.964; range 0 – 591.068). In 2015: €22.309 ppt (median 11.212; range 0 – 244.870). (Figure 1)
- The mean documented mortality for prevalent pts was 14% per year
- A subgroup of incident pts in 2015/16 (n=205) were followed 48M:
 - Mean age 69,9 years (SD±13,4), 55,5% male.
 - In a 12-months (12M) follow-up period after diagnosis: mean 5 admissions (SD±4) and 63 inpatient days ppt (SD±68) were documented. Mean 12M costs: €49.182 ppt (44.175; 0 – 185.692)
 - The mortality after 12M: 33,6% (Figure 2)
- A subgroup of 114 prevalent pts (2015-2020) received a stem-cell-transplant were followed 24M:
 - Mean age was 59 years (SD±11,6), 63% male
 - In a 12-months (12M) follow-up period after SCT: mean 4 admissions (SD±3) and 96 inpatient days ppt (SD±89) were documented. Mean 12M costs: €75.675 ppt (45.276; 12.596 – 438.031)
 - The mortality after 12M: ~20% (Figure 3)

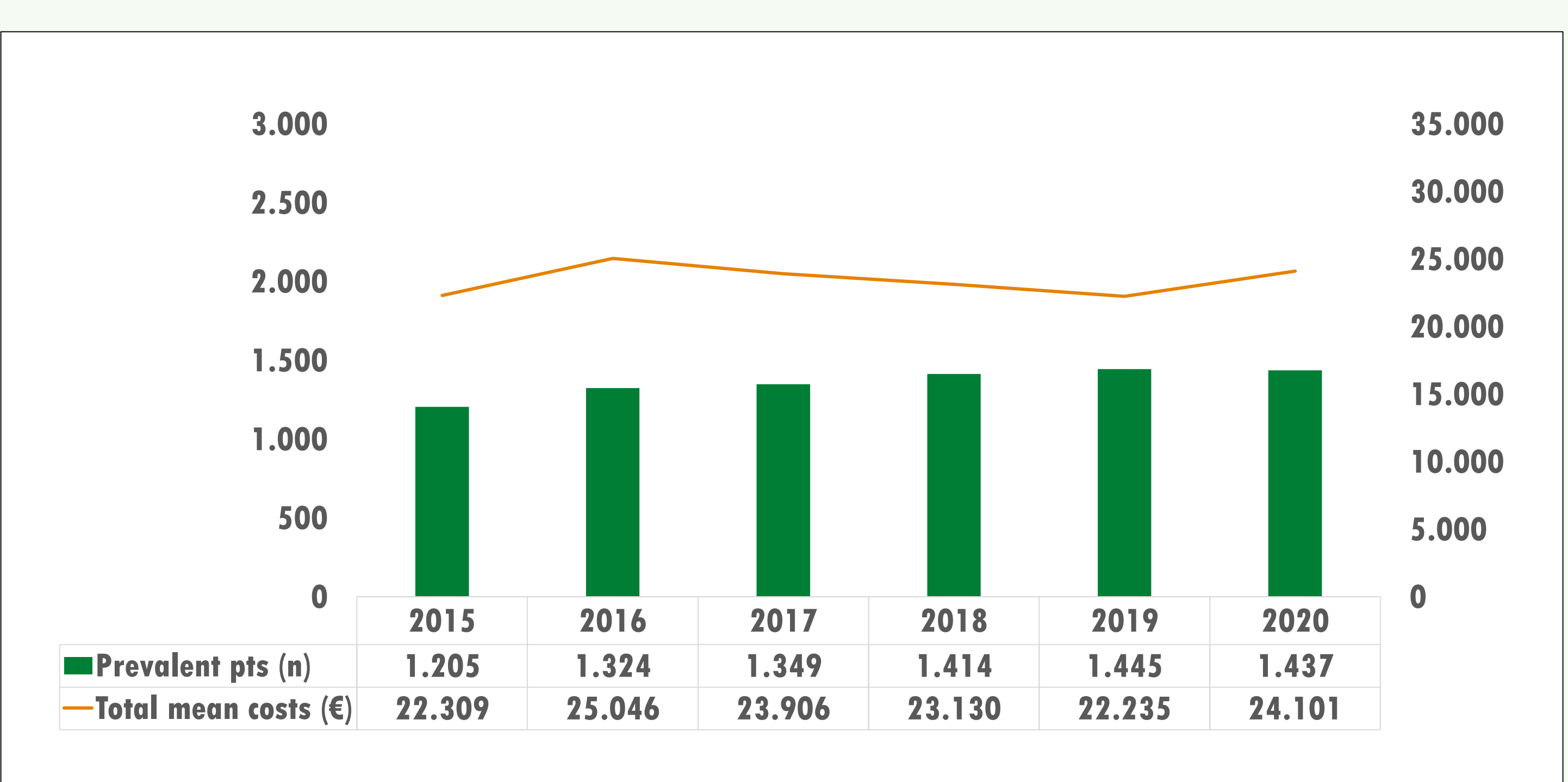


Figure 1: Annual number of prevalent patients (n) and total mean costs (€)

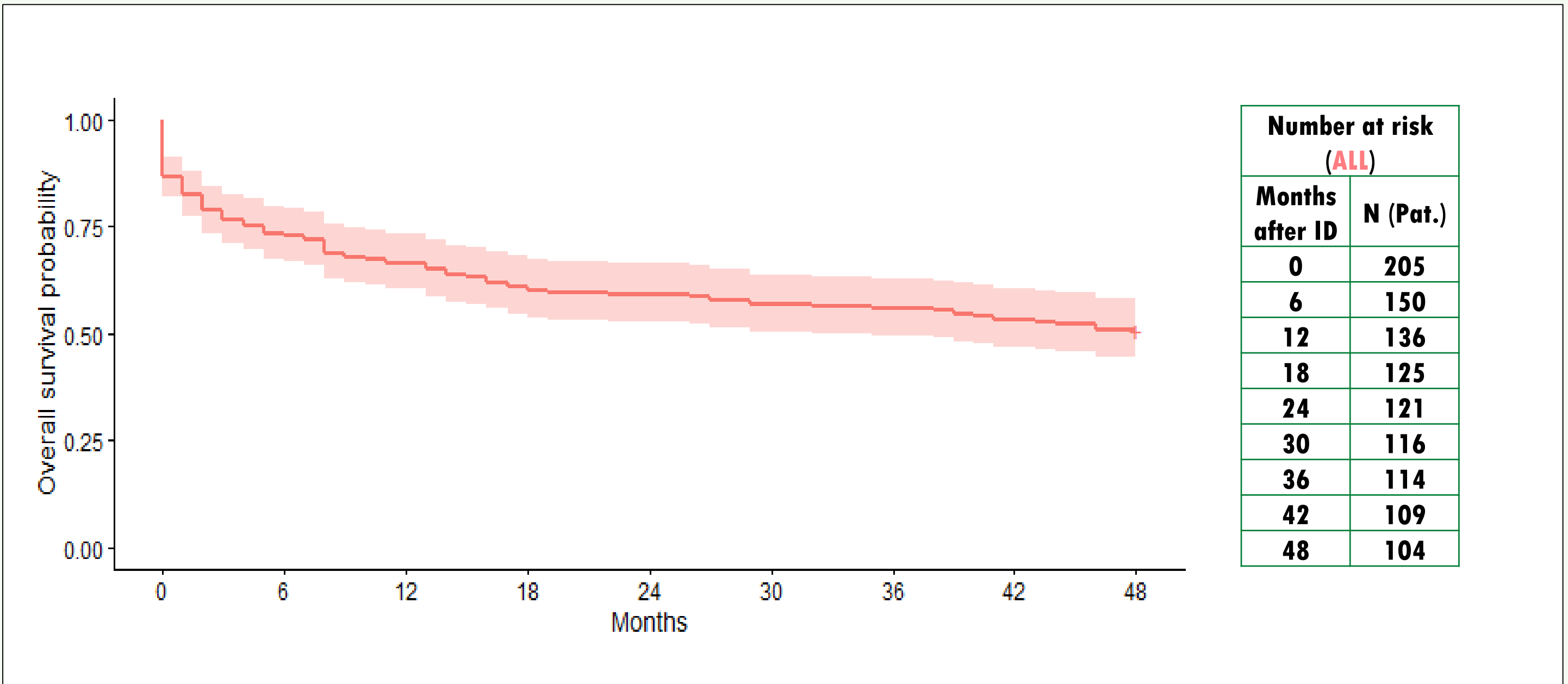


Figure 2: Overall survival probability of incident pts 2015/16

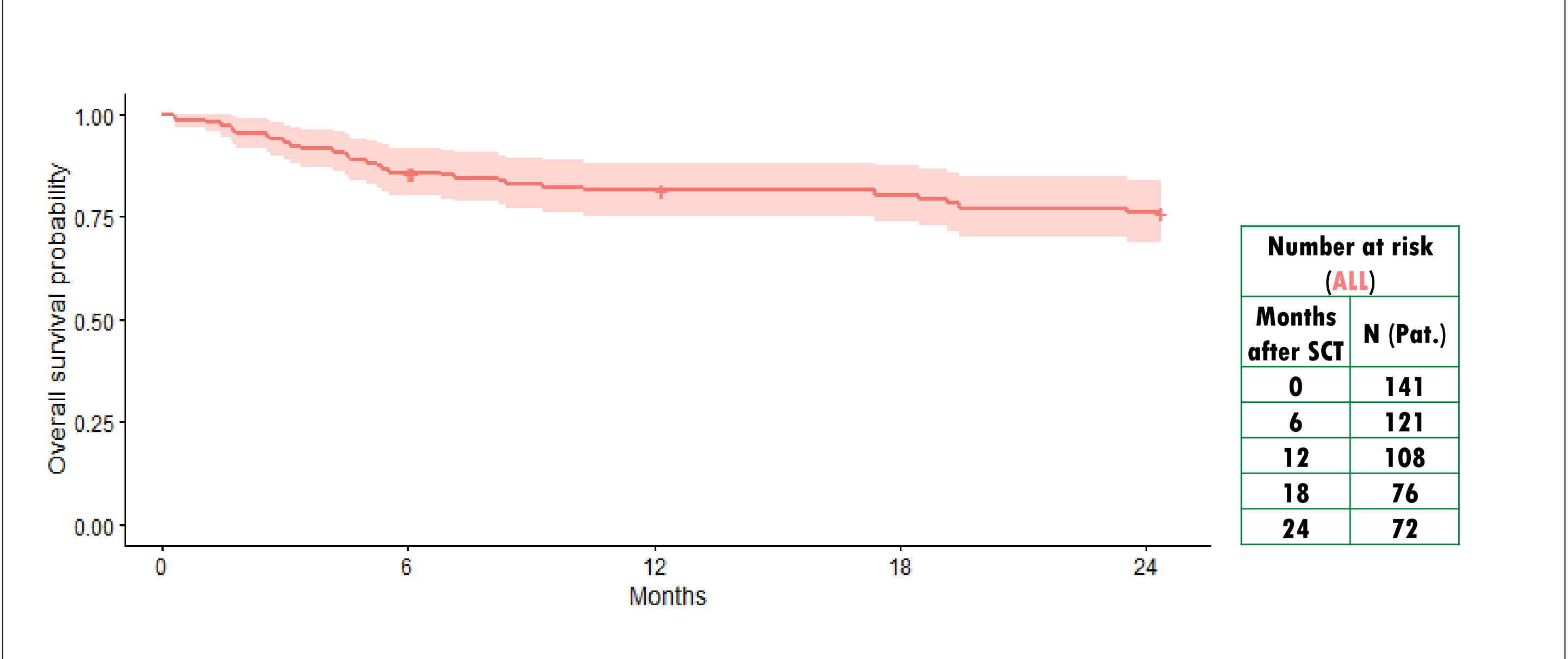


Figure 3: Overall survival probability after SCT (subgroup: prevalent pts)

Conclusion

- Wide cost ranges reflect the heterogeneity of the prevalent DLBCL cohort
- As first-line R-CHOP-therapy is associated with cure-rates of approx. 60-70%^{1,2}, follow-up costs are low. Refractory or relapsed (r/r) patients require further intensive treatment, e.g. a stem cell transplant
- Therefore, mean total costs do not appropriately describe payers economic burden
- By discussing new approaches for r/r DLBCL, the outcomes of SCTs should not be neglected (~77% of pts with 12M survival) - but also additional costs for further treatments in case of failed SCT
- Comprehensive analyses of more granular sources on clinical information (treatment line, tumour stage) are needed

1. Sehn LH, Gascyne RD. Diffuse large B-cell lymphoma: optimizing outcome in the context of clinical and biologic heterogeneity. Blood. 2015 Jan 1;125(1):22-32. doi: 10.1182/blood-2014-05-577189. Epub 2014 Dec 11. PMID: 25499448.
2. Pfreundschuh M, et al. Six versus eight cycles of bi-weekly CHOP-14 with or without rituximab in elderly patients with aggressive CD20+ B-cell lymphomas: a randomised controlled trial (RICOVER-60). Lancet Oncol. 2008 Feb;9(2):105-16. doi: 10.1016/S1473-2045(08)70002-0. Epub 2008 Jan 15. PMID: 18226581.