

#372 Safety profile and associated costs of therapies for relapsed Small Cell Lung Cancer in Switzerland

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BACKGROUND AND OBJECTIVES

Small cell lung cancer (SCLC) is an aggressive disease with poor prognosis, in particular in the relapsed setting. Treatments for relapsed SCLC remain limited, with no new recent approvals in Europe. Lurbinectedin was granted FDA accelerated approval in 2020 for patients with SCLC with disease progression after platinum containing therapy. Differences exist with respect to adverse events (AE) among therapies for 2nd line SCLC (2LSCLC). In addition to the benefits to patients of therapies with fewer undesirable AE, significant savings on direct costs may be achieved from a payers perspective. Our aim was to compare the AE treatment cost of lurbinectedin with those of standard 2LSCLC treatments in Switzerland.

METHODS

A targeted literature search identified specific information associated with 2LSCLC in Switzerland, including therapies, clinical guidelines, unmet needs, epidemiology, resource use and costs of treatments. The Onkopedia guidelines¹² were identified as the most relevant. Therapies used in clinical practice were verified by three clinical experts (2 university-, 1 cantonal hospital in the German- and the French-speaking parts of Switzerland). AE ≥ grade 3 related to treatments were derived from published Randomized Controlled Trials (RCTs) in 2LSCLC, with topotecan (oral and i.v.), CAV (cyclophosphamide + doxorubicin + vincristine), etoposide + carboplatin, and from the phase II Basket trial of lurbinectedin monotherapy in 2LSCLC. Key trials included:

- Topotecan i.v.: von Pawel 1999¹; von Pawel 2001²; Eckardt 2007³; von Pawel 2014⁴; Evans 2015⁵; Goto 2016⁶; Paz-Ares 2021⁸
- Topotecan oral: von Pawel 2001²; O'Brien 2006⁷; Eckardt 2007³; Baize 2020⁸
- CAV: von Pawel 1999¹; Paz-Ares 2021⁹
- Carboplatin + etoposide: Baize 2020⁸
- Lurbinectedin: Trigo 2020¹⁰

Of the AE frequencies reported across the trials, we used three point estimates: the lowest, the highest and the unweighted averages. Resource use and costs were estimated based on published literature, national tariffs and Swiss clinical expert opinion. Scenario analysis with upper and lower limits of incidence of AEs and costs associated with each AE were constructed. To show consistency, a subanalysis including only the most recent trials (Baize 2020, Trigo 2020 and Paz Ares 2021) was completed.

CONCLUSIONS

- **The results of the scenarios constructed arrive at an upper and a lower limit of adverse events costs range between CHF 1,067-1,625 (€ 973-1,481) for lurbinectedin, and between CHF 4,140-10,594 (€ 3,774-9,657) for standard treatments for 2LSCLC in Switzerland.**
- **On average, lurbinectedin was associated with cost savings of 81% (range 74-85%) compared to the costs of treating adverse events (AE), with existing standard treatments.**
- **Lurbinectedin is associated with substantially lower AE treatment costs compared to the average of commonly used 2LSCLC treatments in Switzerland.**

RESULTS

According to the Swiss experts, the 2LSCLC treatment options most commonly used in clinical practice are topotecan (i.v. or oral), CAV, and etoposide plus carboplatin. The comparisons of AE's reported in the pivotal trials of therapies included in this study revealed some differences between lurbinectedin and the comparators, mainly due to reduced myelosuppression occurring with lurbinectedin with lower incidences of anemia, thrombocytopenia, neutropenia and febrile neutropenia.

AE costs were estimated as CHF 9,238 (€8,421) for oral topotecan, CHF 8,608 (€7,847) for IV topotecan; CHF 5,155 (€4,699) for etoposide + carboplatin, CHF 4,942 (€4,505) for CAV and CHF 1,346 (€1,227) for lurbinectedin. Base case results and scenario analysis of lower and upper limits (CHF, €) are presented in Table 1. A subanalysis, conducted with the most up to date evidence from trials published during 2020-2021 showed comparable results (Table 2). Of note, patients in the oral topotecan, IV topotecan, CAV and etoposide+ carboplatin arms of the RCTs included in Table 2 subanalysis, received primary Granulocyte Colony Stimulating Factors (GCSF) prophylaxis. Primary GCSF prophylaxis was not used with lurbinectedin in the single arm open label phase II Basket trial.

Table 1. Cost of management of AEs with 2LSCLC treatments in Switzerland (all RCTs)

Treatments	Lower limit (CHF)	Base case (= unweighted average of lower and upper limit) (CHF)	Upper Limit (CHF)	Lower limit (€)	Base case (= unweighted average of lower and upper limit) (€)	Upper Limit (€)
Lurbinectedin	1,067	1,346	1,625	973	1,227	1,481
Topotecan oral	5,582	9,238	12,895	5,088	8,421	11,755
Topotecan iv	3,807	8,608	16,461	3,470	7,847	15,005
CAV	2,716	4,942	7,169	2,476	4,505	6,535
Carboplatin + Etoposide	4,456	5,155	5,853	4,062	4,699	5,335
Unweighted average of comparators	4,140	6,986	10,594	3,774	6,368	9,657
Cost saving with Lurbinectedin vs. unweighted average of comparators per patient	3,073	5,640	8,969	2,801	5,141	8,176
Cost saving with Lurbinectedin vs. unweighted average of comparators (%) per patient	74	81	85	74	81	85

Table 2. Cost of management of AEs with 2LSCLC treatments in Switzerland (most recent 2020-21 RCTs)

Treatments	Lower limit (CHF)	Base case (= unweighted average of lower and upper limit) (CHF)	Upper Limit (CHF)	Lower limit (€)	Base case (= unweighted average of lower and upper limit) (€)	Upper Limit (€)
Lurbinectedin	1,067	1,346	1,625	973	1,227	1,481
Topotecan oral	5,957	7,995	10,033	5,431	7,288	9,146
Topotecan iv	7,064	8,548	10,033	6,439	7,793	9,146
CAV	2,735	3,502	4,269	2,493	3,193	3,892
Carboplatin + Etoposide	4,456	5,155	5,853	4,062	4,699	5,335
Unweighted average of comparators	5,053	6,300	7,547	4,606	5,743	6,880
Cost saving with Lurbinectedin vs. unweighted average of comparators	3,986	4,954	5,922	3,633	4,516	5,398
Cost saving with Lurbinectedin vs. unweighted average of comparators (%)	79	79	78	79	79	78

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Conflict of interests: J. Markus, N. Mederos and Y. Metaxas declare no conflicts of interest in relation to this poster. B. García is employed by PharmaMar. E. Brock has provided consultancy services to PharmaMar in relation to this poster