DATA FROM THE GERMAN CRISP REGISTRY (AIO-TRK-0315)

TREATMENT PATTERNS, OUTCOME AND QUALITY OF LIFE OF ES-SCLC PATIENTS RECEIVING THIRD-LINE THERAPY

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BACKGROUND

Recurrent extensive-stage small cell lung cancer (ES-SCLC) remains a major therapeutic challenge. While immune checkpoint inhibition (ICI), bispecific antibodies and antibody-drug conjugates offer promise in early lines, outcomes beyond the second line (2L) remain poor. Real-world data on third-line (3L) treatment patterns, clinical outcomes, and quality of life (QoL) following ICI-based first-line (1L) therapy are limited but critical to inform clinical decision-making.

METHODS

CRISP (NCT02622581) is a prospective, open, noninterventional, multicenter lung cancer registry collecting detailed patient and tumor characteristics, treatment data, outcomes, and patient-reported outcomes (PROs) from over 190 cancer sites across Germany. For this analysis, eligible patients were aged ≥18 years with histologically confirmed ES-SCLC who progressed during 2L therapy and initiated 3L treatment.

RESULTS

Patient demographics are shown in **Table 1.** In the 1L setting, 68 (82.9 %) received platinum-based chemotherapy + ICI and 68 (82.9 %) were platinum-refractory (time to next treatment < 3 months). 2L therapy consisted of topotecan (47.6 %) and other chemotherapies (52.4 %). The three most common 3L regimens are shown in **Table 2.** Local radiotherapy was used in 19 (23.2 %) of patients in the 3L. Median real-world progression-free survival was 2.2 months (95 % CI: [1.8,3.0]) and real-world overall survival (rwOS) 4.4 months (95 % CI:[3.4,5.2]) **(Figure 1)**. Exploratory analyses showed numerically longer rwOS with increasing time between 1L and 2L initiation (< 6 months: 3.4 months; 6 – 11 months: 4.4 months; ≥ 12 months: 8.3 months) **(Figure 2).** QoL, assessed by FACT-L subscales, remained stable during follow-up **(Figure 3).**

CONCLUSION

Outcomes in 3L therapy in ED-SCLC remain poor among subgroups, even in predominantly ICI-pretreated patients, strongly highlighting the need for better 3L strategies. While QoL can be preserved, therapeutic efficacy is lacking. This real-world data is critical to support shared decision-making, helping clinicians and patients weigh the limited benefits of further chemotherapy against best supportive care.

Table 2: Treatment patterns and effectiveness in 3

Treatment patterns and effectiveness in 3L	n (%), N = 82
Paclitaxel	18 (22)
Topotecan	18 (22)
Cyclophosphamide, Doxorubicin, Vincristine	14 (17.1)
Carboplatin, Etoposide	8 (9.8)
Ipilimumab, Nivolumab	5 (6.1)
Carboplatin, Paclitaxel	4 (4.9)
Atezolizumab	2 (2.4)
Cyclophosphamide, Epirubicin, Vincristine	2 (2.4)
Docetaxel	2 (2.4)
Gemcitabine, Vinblastin	2 (2.4)
Other	3 (3.7)
Radiotherapy in 3L	
Yes	19 (23.2)
No	62 (75.6)
Missing	1 (1.2%)
Best response to 3L treatment	
CR	0 (0)
PR	7 (8.5)
SD	13 (15.9)
PD	29 (35.4)
Missing	30 (36.5)
L3 not yet completed	3 (3.7)

Table 1: Demographic and clinical characteristics and treatment patterns prior 3L

Patient characteristics	n (%), N = 82
Age at 3L initiation, median (25 – 75 % quartile)	**64.4 (60.0 – 69.1)**
Sex	
Female	34 (41.5)
Male	48 (58.8)
Smoking status at inclusion	
History of smoking	76 (92.7)
No history of smoking	3 (3.7)
Missing	3 (3.7)
ECOG at 3L initiation	
0	15 (18.3)
1	32 (39)
≥2	16 (19.5)
Missing	19 (23.2)
BMI at inclusion (kg/m2), mean (±SD)	**26.1 (5.63)**
Charlson Comorbidity Index (CCI) [0-24] at inclusion	
Brain	45 (54.9)
Bone	45 (54.9)
Liver	47 (57.3)
Lung (contralateral)	17 (20.7)
Distant lymph node	42 (51.2)
Adrenal gland	31 (37.8)
Pleura	24 (29.3)
Treatment characteristics prior 3L	
1L treatment	
Carboplatin, Etoposide, Atezolizumab	61 (74.4)
Carboplatin, Etoposide	10 (12.2)
Cisplatin/Carboplatin, Etoposide, Atezolizumab	4 (4.9)
Cisplatin/Carboplatin, Etoposide	2 (2.4)
Cisplatin, Etoposide	2 (2.4)
Cisplatin, Etoposide, Atezolizumab	1 (1.2)
Carboplatin, Etoposide, Paclitaxel, Atezolizumab	1 (1.2)
Carboplatin, Etoposide, Vincristine, Atezolizumab	1 (1.2)
2L treatment	
Topotecan	39 (47.6)
Cyclophosphamide, Doxorubicin, Vincristine	11 (13.4)
Carboplatin, Etoposide	9 (11)
Carboplatin, Etoposide, Atezolizumab	6 (7.3)
Carboplatin, Paclitaxel	4 (4.9)
Cyclophosphamide, Epirubicine, Vincristine	4 (4.9)
Atezolizumab	3 (3.7)
Carboplatin, Bendamustin	3 (3.7)
Carboplatin, Etoposid, Lurbinectidin	3 (3.7)
Radiotherapy prior to 3L	
Yes	60 (73.2)
Conventional fractionated radiotherapy	57 (45.6)
Stereotactic ablative radiotherapy	19 (15.2)
Chemoradiotherapy	10 (8)
Brachytherapy	12 (9.6)
Other	14 (11.2)
Missing	19 (15.2)
No	21 (25.6)
1L platinum sensitivity status	
CFI < 90 days	68 (82.9)
CFI ≥ 90 to < 180 days	11 (13.4)
Time from start 1L to start 3L	
< 6 months	9 (11)
6 – 11 months	36 (43.9)
12 – 24 months	32 (39.1)
> 24 months	5 (6.1)

CFI: chemotherapy-free interval; ECOG: Eastern Cooperative Oncology Group; SD: Standard deviation

Figure 1: Kaplan-Meyer curve for real-world overall survival in 3L therapy

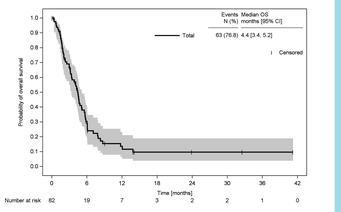
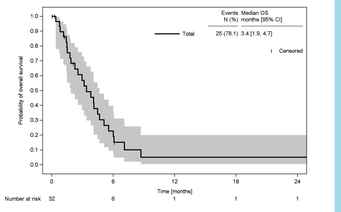
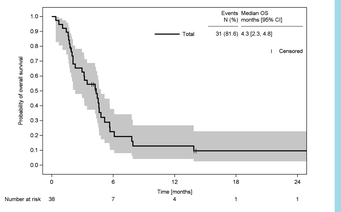


Figure 2: Kaplan-Meyer curve for real-world overall survival in 3L therapy.

2A: Patients who initiated 2L within 6 months after start of 1L



2B: Patients who initiated 2L between 6 – 11 months after start of 1L



2C: Patients who initiated 2L ≥ 12 months after start of 1L

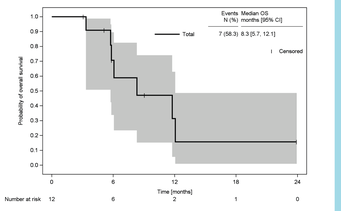
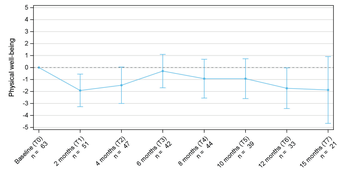
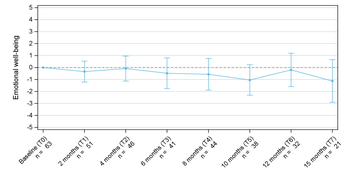


Figure 3: Change in health-related quality of life from baseline to month 15.

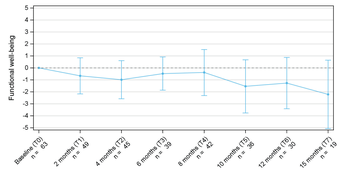
3A: Physical well-being



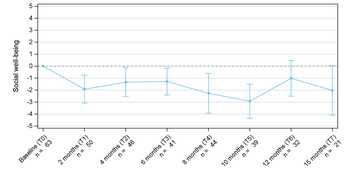
3B: Emotional well-being



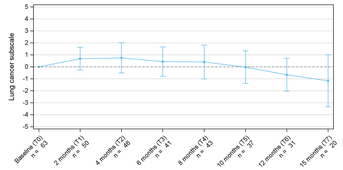
3C: Functional well-being



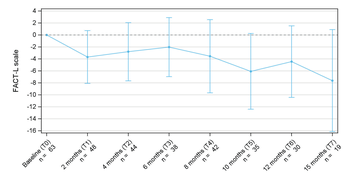
3D: Social well-being



3E: Lung cancer subscale LCS



3F: FACT-L total scale



Mean change from baseline plots (mean ± 95% CI) for the FACT-G subscales (A) physical well-being, (B) emotional well-being, (C) functional well-being, (D) social well-being and the (E) lung cancer subscale LCS, and for the (F) FACT-G and (G) FACT-L total scale.