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Evaluation of outcome and toxicity of Durvalumab treatment after CRT in inopera stage III NSCLC

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Objective

PD-L1 inhibition with Durvalumab as maintenance treatment after concurrent chemoradiotherapy (CRT) has become the standard of care in inoperable stage III non-small cell lung cancer (NSCLC) based on the excellent PACIFIC trial results. The aim of this prospective single center study was to evaluate the outcome and toxicity of Durvalumab treatment after CRT.

Patients and methods:

All patients at our cancer center treated with Durvalumab maintenance treatment after CRT for inoperable stage III NSCLC were prospectively included in this study.

Clinical characteristics, toxicity and outcome were evaluated. Toxicity was collected using the Common Terminology Criteria for Adverse Events version 5 before and during treatment. Re-staging after CRT and before the start of Durvalumab consisted of a CT scan (thorax/upper abdomen). 18F-FDG-PET-CT was performed 3 months and CT 6 months after start of maintenance treatment.

Results:

Data of 16 patients treated with Durvalumab after CRT/RT were evaluated. Three patients (19%) were female and 13 (68%) male, median age at treatment start was 64 years. 10 (53%) patients had T4 or T3 tumors, four (25%) patients had N3 and 9 (56%) N2 disease. 15 Patients had CRT with a medium radiation dose of 63.20 Gy and were treated with two concurrent cycles of platin-based chemotherapy. One patient was treated with moderate hypofractionated radiotherapy without chemotherapy.

Median follow-up was 7 (range:2-16) months. All patients were alive at the time of evaluation. Four (25%) patients have developed oligoprogression. Metastastic sites were bone, brain, adrenal gland and distant lymph nodes. Two patients received second-line chemotherapy after distant failure. Another two received stereotactic body radiotherapy for all metastatic sites and continued on Durvalumab.

Common toxicity during Durvalumab was dermatitis (I-II° CTCAE) which occurred earliest after 2 cycles in 10 (65%) patients and pneumonitis II° CTCAE in 2 (13%) and III° CTCAE in 2 (13%) patient between 2-7 months after completion of CRT. In total, 3 (19%) patients discontinued Durvalumab treatment after a median of 4 months due to distant progression or unacceptable toxicity.

Conclusion

Durvalumab was well tolerated with reversible acute toxicity. 25% of patients develop oligoprogression after a mean time of 5.5 months after the end of CRT.

Characteristics	No. of patients (%)
Gender	
Man	13 (81)
Woman	3 (19)
T-stage	
1	1 (6)
2	5 (31)
3	5 (31)
4	5 (31)
N-stage	
0	3 (19)
1	0 (0)
2	9 (56)
3	4 (25)

Table I. Patient characteristics

Toxicity during Durvalumab treatment	
Dermatitis I-II°	10 (65%)
Dermatitis III°	0 (0%)
Pneumonitis II°	2 (13%)
Pneumonitis III°	2 (13%)

Table II. Toxicity evaluated with Common Terminology Criteria for Adverse Events (CTCAE) version 5

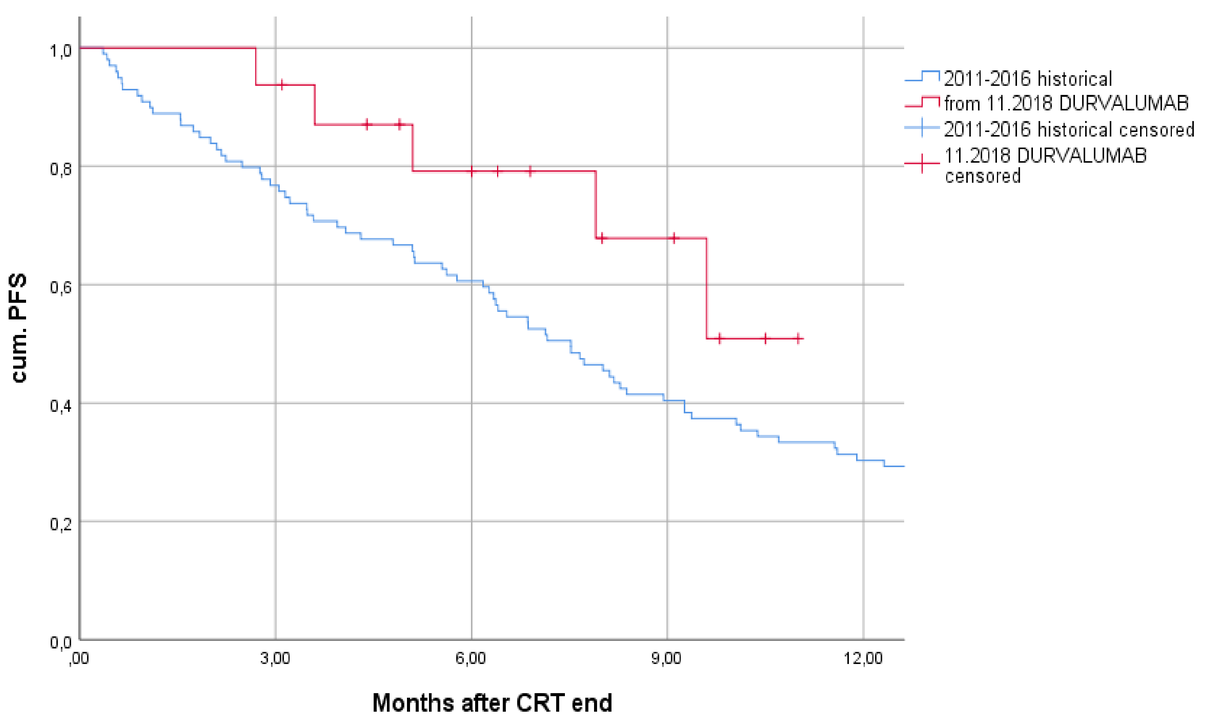

Figure I. Kaplan-Meier curve of progression-free survival of prospective Durvalumab cohort and historical cohort

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