Abstract #372 Impact of Comorbidity and Venous Thromboembolism on Outcome in Real-life Non-Small Cell Lung Cancer (NSCLC) Patients Treated with Immune Checkpoint Inhibition (ICI).

Birgitte Bjørnhart (1-3), Charlotte Kristiansen (6), Karin Holmskov Hansen (1,3), Kim Wedervang (7), Christa Haugaard Nyhus (6), Trine Lembrecht Jørgensen (1,2,4), Jørn Herrstedt (5), Tine Schytte(1,2).
(1) Department of Oncology, Odense University Hospital, (2) Institute of Clinical Research, University of Southern Denmark, Odense, Denmark, (3) OPEN, Odense patient data Explorative Network, Odense University Hospital, (4) Academy of Geriatric Cancer Research, Odense, Denmark
(5) Department of Clinical Oncology, Zealand, University Hospital Roskilde, Denmark, (6) Department of Oncology, Vejle Hospital Lillebælt, Vejle, (7) Department of Oncology, Hospital of Southern Jutland, Sønderborg, Denmark.

Table 1.

Baseline characteristics n= 367	
Age, median (years), range	69 (42-92)
Sex, n (%)	
Females	194 (53)
Smoking history, n (%)	
Tobacco-years, median, (range)	40 (0-115)
Histology, n (%)	
Non-specified carcinoma	15 (4)
Adenocarcinoma	241 (66)
Squamous cell carcinoma	111 (30)
PD-L1 (TPS), n (%)	
<1%/≥1<50%/≥50%	15/91/212 (4/25/58)
NR	49 (13)
Line of treatment	
1st line	139 (38)
≥2 line	228 (62)
Performance Status, n (%), n=366	
0-1	307 (83)
≥2	59(16)

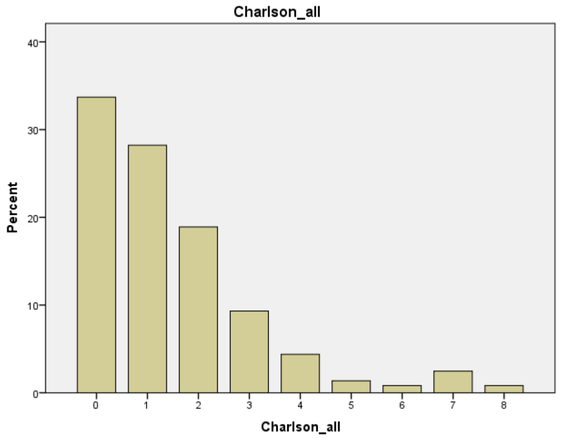


Figure 1: Charlsons Comorbidity Index Score (CCIS) range 0-8 (n=367)

Background

Real-life patients eligible for ICI differ from clinical trial populations in terms of higher age, more tobacco-related comorbidity, poorer performance status (PS) and more widespread metastatic disease. These factors may increase the risk of cancer-associated venous thromboembolism (VTE), which is particularly high for lung cancer compared to many other cancers. Studies on VTE and comorbidity prevalence as well as impact on outcome in real-life NSCLC patients undergoing ICI are lacking but warranted.

Methods and Materials

Retrospective data of 367 incurable stage III-IV NSCLC patients treated with ICI at three different Danish Oncologic Departments from 2015-2019 was gathered. Comorbidity, a history of prior known VTE (P-VTE), development of VTE from first ICI until two months after last ICI (D-VTE) and from first ICI until end of follow-up (F-VTE) were registered. For survival analysis Kaplan Meier and cox regression were performed.

Conclusion

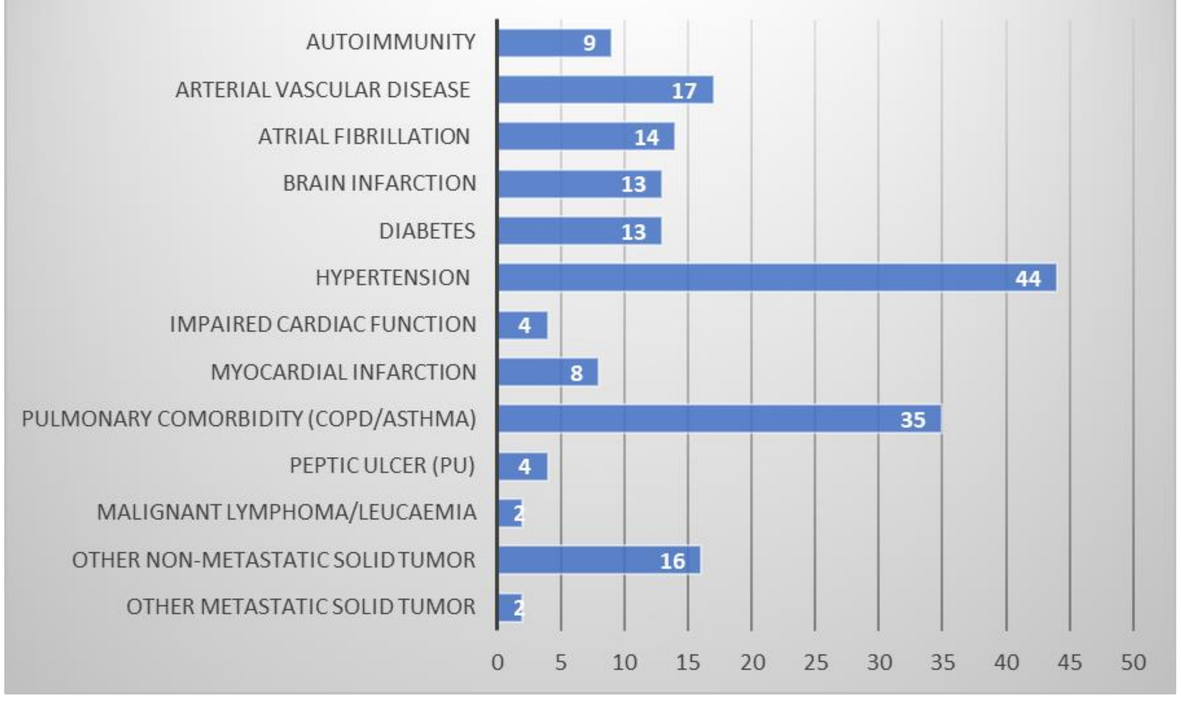
Real life NSCLC patients eligible for palliative ICI have substantial comorbidity. Having a P-VTE prior to ICI increases the risk of recurrent VTE considerably. PU and HT seem to increase the risk of impaired outcome from ICI. VTE development during ICI in NSCLC real life patients might be associated to PD-L1 level. Future prospective studies need to explore this and the impact of VTE and comorbidity on outcome.

Results

Table 2: VTE history and development	
Known baseline VTE (P-VTE), n (%)	45/367 (12)
VTE during ICI (D-VTE), n(%)	21/365 (6)
VTE any point after 1. ICI (F-VTE), n(%)	38/365 (10)
Median time to D-VTE in months, (IQR)	2.6 (0.9-6.1)

Median follow-up time was 29.1 months. D-VTE for first line ICI: 8% and ≥ 2. Line: 4%. Of F-VTEs 82 % were pulmonary embolisms. Of those with P-VTE, 15% had D-VTE and 24% had F-VTE despite use of guideline prescribes anticoagulants. PD-L1 ≥ 50% correlated to radiologic response (RR) (r=0.25, p<0.0009), but D-VTE and F-VTE did not. Precise PD-L1 status was obtained for 55% and D-VTE correlated to PD-L1 level ≥ 80 % (r=0.2, p=0.024). In multivariate analysis hypertension (HT), peptic ulcer (PU) and PS ≥2 were significantly associated to impaired OS and PFS.

Figure 2: Distribution of baseline comorbidities



AgeCare Academy of Geriatric Cancer Research
Region of Southern Denmark
OUH Odense University Hospital
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Corresponding author:
Birgitte Bjørnhart, MD, Clinical Oncologist, PhD-fellow
Birgitte.Bjornhart@rsyd.dk

Disclosures

- I have no disclosures to report.