

P3.199: Alteration-matched therapy in advanced lung cancer: results from the IMPRESS-Norway study

Turid Rygh Skaara^{1,2,4}, Katarina Pucio², Ingrid Dyvik^{2,4}, Kathinka Schmidt Slørdahl¹, Ragnhild Sørum Falk³, Sigmund Brabrand¹, Pitt Frederik Niehusmann^{1,5}, Eli Sihh Samdal Steinskog⁶, Egil Støre Blix⁷, Åsmund Flobak^{8,9,10}, Irja Alida Oppedal¹¹, Sebastian Meltzer¹², Cecilie Fredvik Torkildsen^{13,14}, Maria Moksnes Bjaanæs¹, Tom Dønne^{7,15}, Håvard Njå¹⁶, Tesfaye Madebo^{17,18}, Atle Totland¹⁹, Marte Grønlie Cameron²⁰, Tarje Onsjøen Halvorsen^{21,8}, André Indseth Korneliusen²², Randi Hovland²³, Mari Jebens²⁴, Ulla Randen²⁵, Emiel A. M. Janssen²⁶, Kate Myreng²⁷, Tormod K. Guren¹, Sigbjørn Smeland¹, Kjetil Taskén^{2,4}, Hege Elisabeth Giercksky Russnes^{2,4,5}, Aslaug Helland^{1,2,4}, Åsa Kristina Øjert^{1,2}

¹Dept. of Oncology, Oslo Univ. Hosp., Oslo, Norway, ²Inst. for Cancer Research, Oslo Univ. Hosp., Oslo, Norway, ³Oslo Ctr. for Biostatistics and Epidemiology, Oslo Univ. Hosp., Oslo, Norway, ⁴Inst. of Clinical Medicine, Fac. of Medicine, Univ. of Oslo, Oslo, Norway, ⁵Dept. of Pathology, Oslo Univ. Hosp., Oslo, Norway, ⁶Dept. of Oncology and Medical Physics, Haukeland Univ. Hosp., Bergen, Norway, ⁷Dept. of Oncology, Univ. Hosp. of North Norway, Tromsø, Norway, ⁸The Cancer Clinic, St. Olavs Univ. Hosp. HF, Trondheim, Norway, ⁹Dept. of Clinical and Molecular Medicine, NTNU, Trondheim, Norway, ¹⁰Dept. of Biotechnology and Nanomedicine, Sintef Industry, Trondheim, Norway, ¹¹Dept. of Thoracic Medicine, Haukeland Univ. Hosp., Bergen, Norway, ¹²Dept. of Oncology, Akershus Univ. Hosp., Lørenskog, Norway, ¹³Dept. of Gynecology and Obstetrics, Stavanger Univ. Hosp., Stavanger, Norway, ¹⁴Ctr. for Cancer Biomarkers, Univ. of Bergen, Bergen, Norway, ¹⁵Dept. of Clinical Medicine, UiT the Arctic Univ. of Norway, Tromsø, Norway, ¹⁶Dept. of Oncology, Innlandet Hosp. Trust, Gjøvik, Norway, ¹⁷Dept. of Pulmonary Medicine, Stavanger Univ. Hosp., Stavanger, Norway, ¹⁸Dept. of Clinical Science, Univ. of Bergen, Bergen, Norway, ¹⁹Dept. of Pulmonary Medicine, Hugesund Hosp., Helse Fonna HF, Hugesund, Norway, ²⁰Dept. of Oncology, Sarlandet Hosp., Kristiansand, Norway, ²¹Dept. of Clinical and Molecular Medicine, NTNUI, Trondheim, Norway, ²²Dept. of Oncology, Sykehuset i Vestfold HF, Tønsberg, Norway, ²³Dept. of Pathology, Haukeland Univ. Hosp., Bergen, Norway, ²⁴Dept. of Pathology, St. Olavs Univ. Hosp. HF, Trondheim, Norway, ²⁵Dept. of Pathology, Akershus Univ. Hosp., Lørenskog, Norway, ²⁶Dept. of Pathology, Stavanger Univ. Hosp., Stavanger, Norway, ²⁷Dept. of Pathology, Univ. Hosp. of North Norway, Tromsø, Norway

Correspondence: turryg@ous-hf.no

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INTRODUCTION

- Targeted therapy has transformed outcomes for patients with lung cancer.¹
- Treatment options remain limited for those with rare or resistance-associated alterations.²
- The efficacy of off-label treatment in this setting remains largely unknown.
- Comprehensive Genomic Profiling (CGP) can identify actionable biomarkers beyond approved indications.³
- The main objective of IMPRESS-Norway is to evaluate the feasibility and clinical benefit of CGP-guided treatment allocation.

METHODS

- IMPRESS-Norway is an ongoing, national phase II, precision medicine trial evaluating the feasibility of CGP-guided treatment allocation and efficacy defined as disease control rate (confirmed CR, PR or SD) after min. 16 weeks of treatment.
- Eligible patients with advanced cancers and no further standard treatment options are screened with GCP.
- National Molecular Tumour Board (MTB) reviews molecular profiling results and allocates patients to trial drugs.
- We report the lung cancer subset screened and discussed at the MTB (April 2021 – August 2025).

DISCUSSION AND CONCLUSION

- Molecularly guided treatment allocation was feasible in patients with pretreated lung cancer.
- An actionable alteration eligible for inclusion in IMPRESS-Norway was identified in n = 47, 22% of 216 profiled patients (Fig.1).
- Nonetheless, a substantial amount (n = 14, 29%) failed to initiate treatment, mainly due to clinical deterioration or death. This underscores the need for early CGP in this population.
- The disease control rate (DCR) of nearly 30% in the response evaluable population (Fig.3), with partial responses in selected cohorts, suggests clinical benefit in a population with limited treatment options, at a manageable safety profile.

REFERENCES & ACKNOWLEDGEMENTS

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Artificial Intelligence (AI) Use Disclaimer

During the preparation of this work, the authors used Claude (Claude Sonnet 5, Anthropic) for language refinement and readability. The authors reviewed and edited the content and take full responsibility of the final content.

RESULTS

Figure 1. Patient recruitment

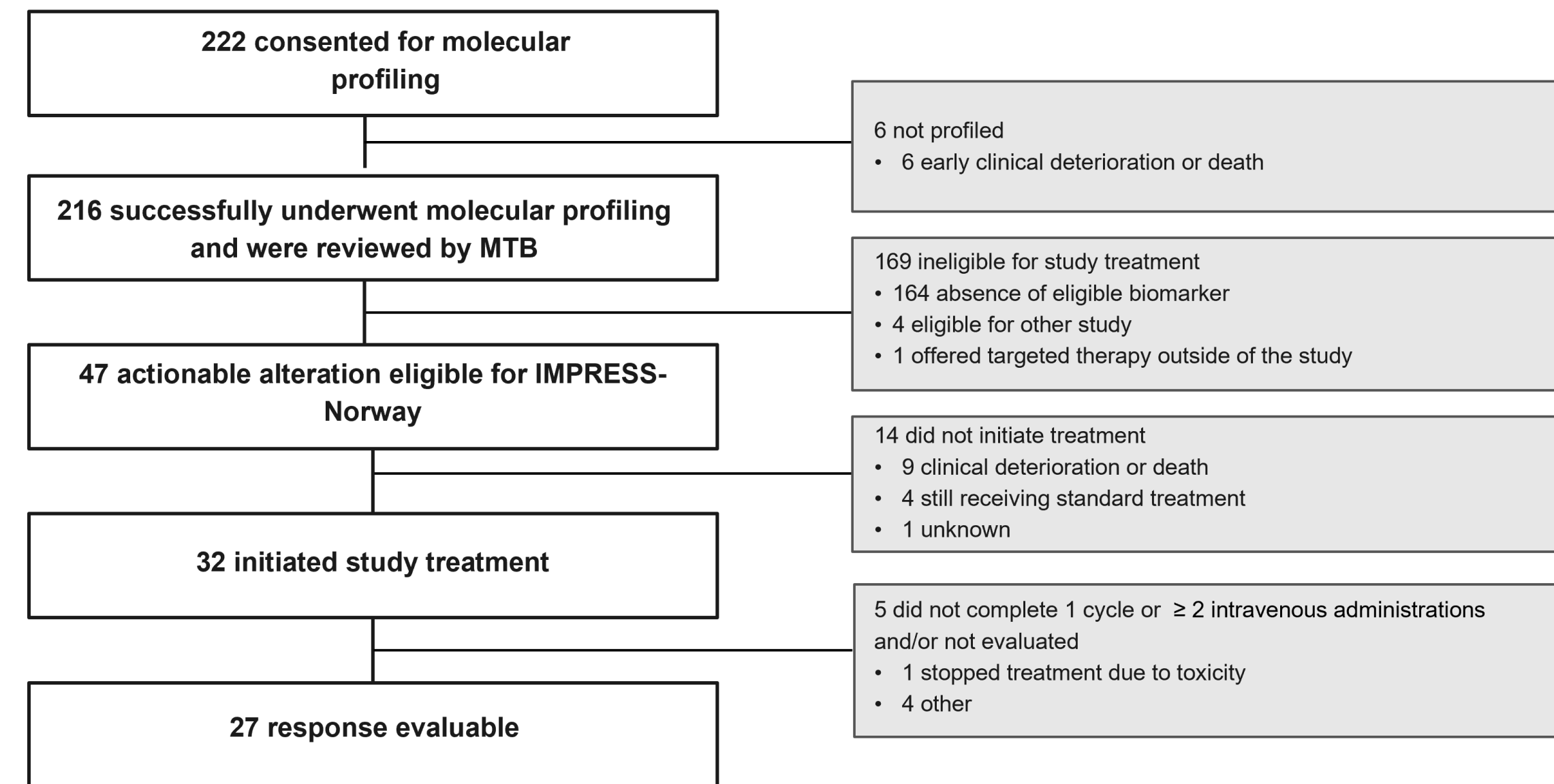


Figure 1. Flow chart of patients included in IMPRESS-Norway between April 2021 and August 2025. Of 222 included patients, 47 patients (21%) were eligible, and 32 (68%) of these initiated study treatment. Twenty-seven patients (84%) were response evaluable.

Figure 2. Swimmer-plot

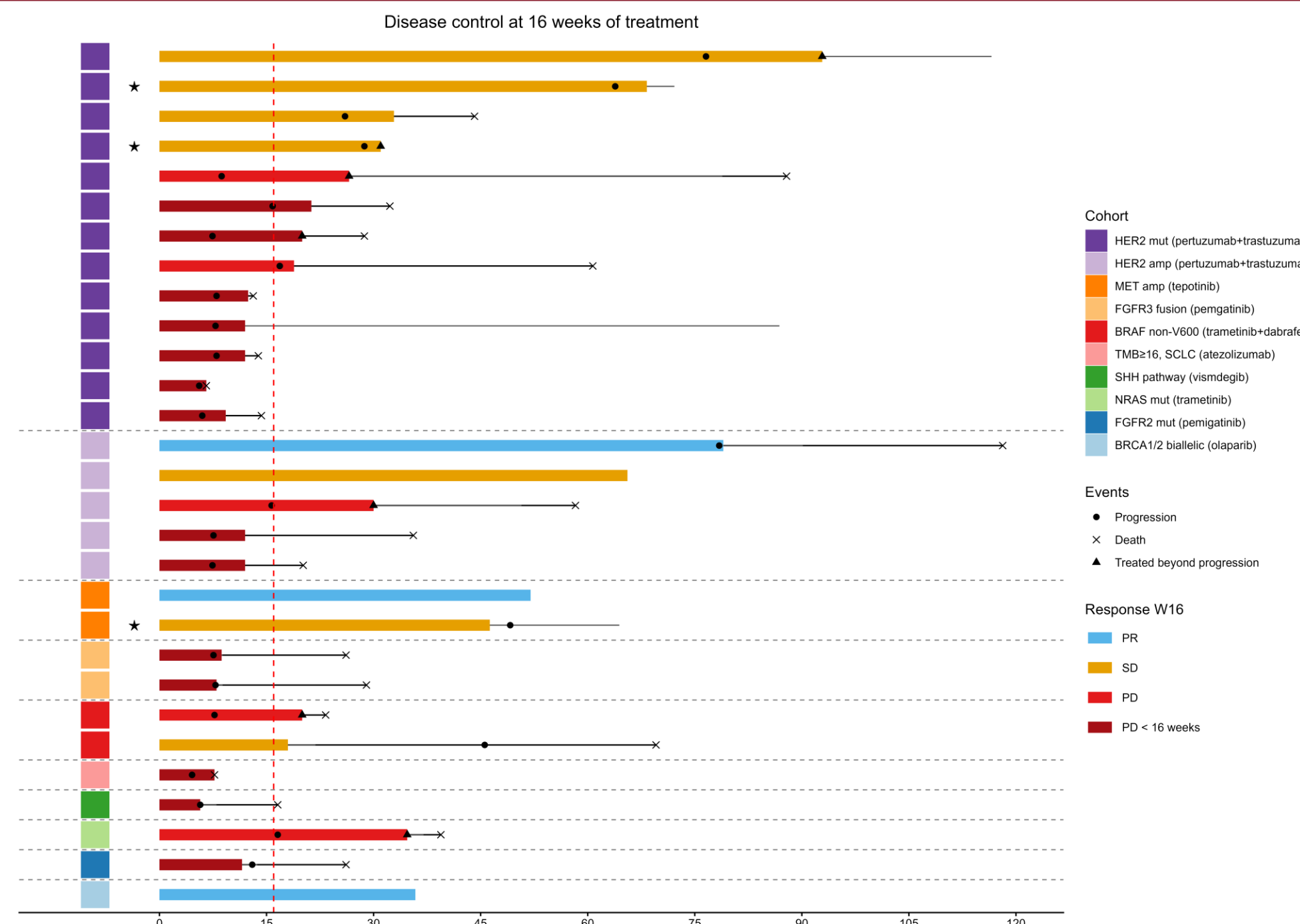


Figure 2. Swimmer plot of twenty-seven response evaluable patients with lung cancer in IMPRESS-Norway. One patient received three sequential treatment lines within the trial, each treatment course identified as a separate bar in this plot.

Figure 4. and 5. PFS and OS

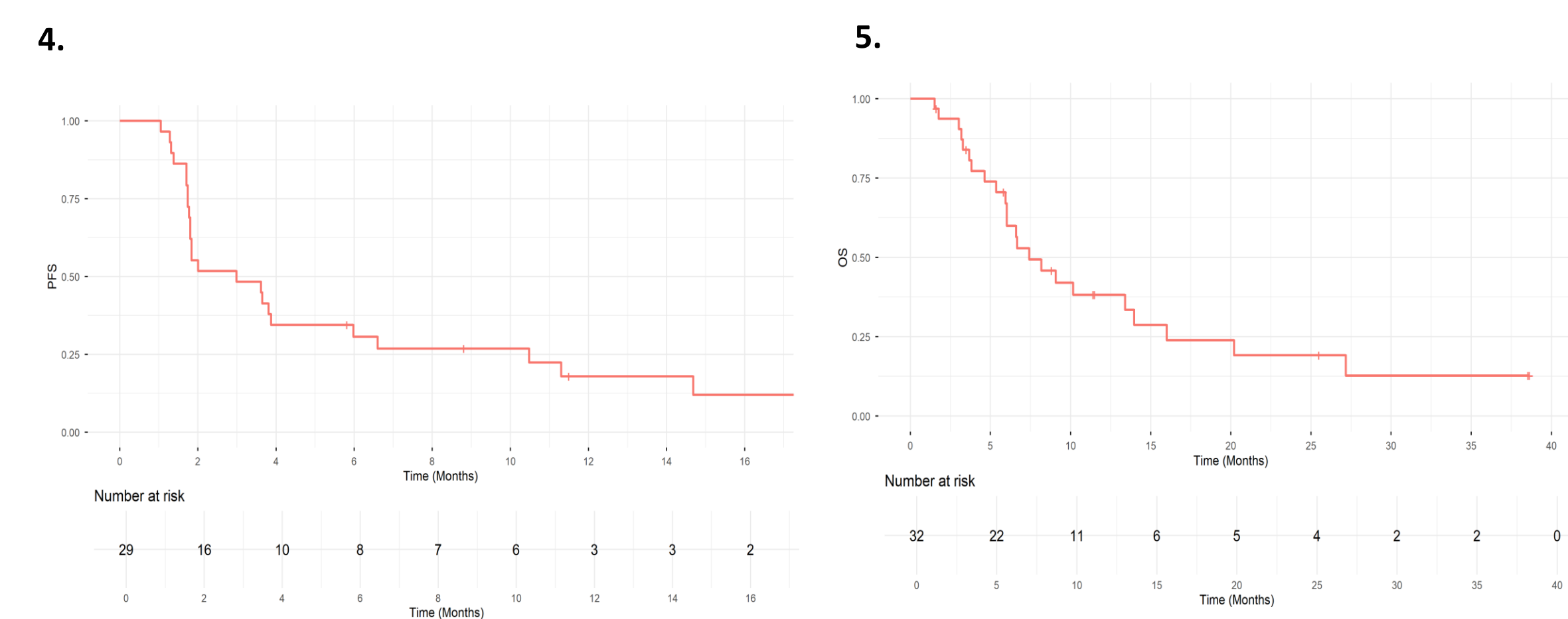


Figure 4. PFS on response evaluable population (n=27 patients; 29 treatment episodes as as one patient received three sequential treatment lines). Median PFS 3.0 months (95% CI 1.8- 6.6)

Figure 5. OS on full analysis set (n= 32). Median OS 7.4 months (95% CI 6.0- 16.0)

Table 1. Patient characteristics

Characteristics	Median (range)	Molecular screening n = 222 (%)	Patients treated in cohort n = 32 (%)
Age		62 (21-85)	62 (48-78)
Sex			
Female		116 (52)	19 (59)
Male		106 (48)	13 (41)
ECOG performance status			
0		61 (27)	8 (25)
1		115 (52)	18 (56)
2		41 (18)	6 (19)
3		2 (1)	-
NA		1 (1)	-
Histology			
Non-small cell lung cancer		197 (89)	30 (94)
Adenocarcinoma		146 (66)	24 (75)
Squamous cell carcinoma		35 (16)	4 (13)
Other*		16 (7)	2 (6)
Small-cell lung cancer		25 (11)	2 (6)
Previous treatment lines			
1		-	11 (34)
2		-	12 (38)
≥3		-	9 (28)

Table 1: Patient characteristics of screened (n=222) and treated patients (n =32). *Undifferentiated carcinoma, adenoid cystic carcinoma in lung, adenosquamous carcinoma, large cell carcinoma, large cell neuroendocrine carcinoma, pleomorphic carcinoma and carcinoid.

Figure 3. DCR

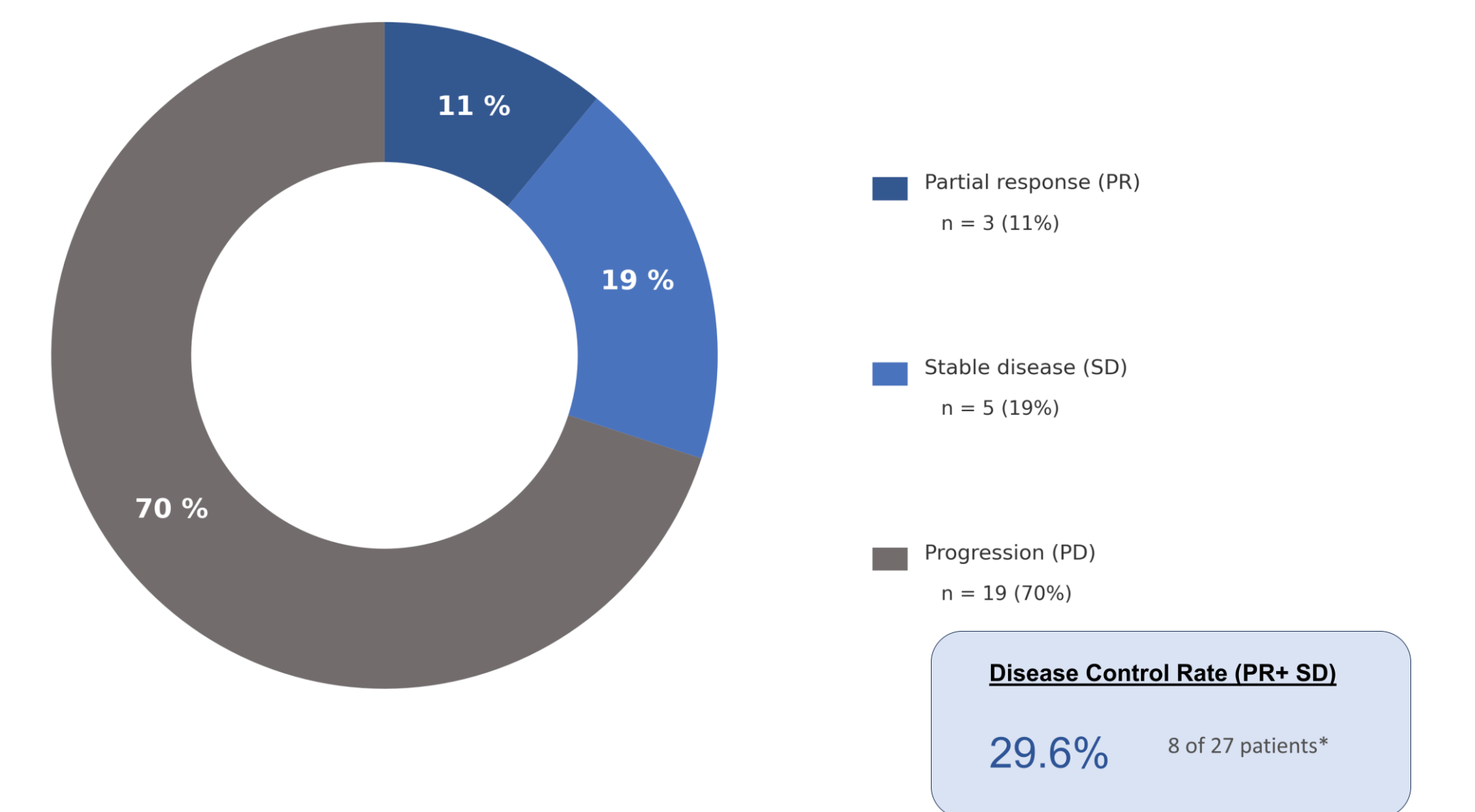


Figure 3. DCR after 16 weeks per response evaluable population (n = 27). *Response evaluable population received ≥1 cycle oral treatment or ≥2 intravenous administrations and underwent at least one disease evaluation.

Table 2. Safety

Drug / drug combination	Adverse event CTCAE term	Grade 3	Grade 4
Atezolizumab	Autoimmune disorder		1
Pertuzumab + trastuzumab	Diarrhea	1	
	Infection unspecified location	1	
	Nausea	2	
	Vomiting	1	
Trametinib+ dabrafenib	Aspartate aminotransferase increased	1	
	Gastrointestinal disorders	1	
	Musculoskeletal and connective tissue disorder	1	
Trametinib	Platelet count decreased	1	
	Cystitis non-infective	1	
	Lung infection	2	
	Rash maculo-papular	1	
	Thromboembolic event**	1	
	Urethral mucositis*	1	
Vismodegib	Alanine aminotransferase increased	1	

Table 2: Treatment-related adverse events ≥ 3 among 32 patients that initiated treatment, by drug and grade, according to Common Terminology for Adverse Events (CTCAE) v 5.0. There were no ≤ 2 grade serious adverse events.

