toxicity (TWiST), and time with disease progression (REL). Quality-adjusted time spent in each state was calculated by applying health-state utilities to the estimated mean time in that health state. Quality-adjusted PFS (QA-PFS) and quality-adjusted overall survival (Q-TWiST) were assessed. Utilities for TOX, TWiST, and REL were assigned as 0.756, 0.793, and 0.55 (0 for QA-PFS), respectively. BIRC and INV-assessed progression (PROG) were used.

Results: Compared to patients with CRZ (n = 138), patients with BRG (n = 137) had a longer mean duration of TWiST (26.1 vs 16.9 months, P<0.001) and TOX (2.3 vs 1.1 months, P=0.064) but shorter REL (10.5 vs 19.9 months, P<0.001) using BIRC-assessed PROG. Similar results of mean duration for these three health states were found using INV-assessed PROG. There were significant improvements in QA-PFS and Q-TWiST for BRG vs CRZ using BIRC and INV-assessed PROG (Table).

Table: 1156P Mean (SE) Q-TWiST and QA-PFS by BIRC and INV-assessed PROG

Q-TWiST (months)				
	BRG	CRZ	Q-TWiST Gains	P value
BIRC PROG	28.2 (1.1)	25.1 (1.1)	3.1 (1.6)	0.045
INV PROG	28.5 (1.2)	24.8 (1.1)	3.7 (1.6)	0.018
QA-PFS (months)				
	BRG	CRZ	QA-PFS Gains	P value
BIRC PROG	22.5 (1.4)	14.2 (1.3)	8.3 (1.9)	<0.001
INV PROG	23.2 (1.4)	13.1 (1.2)	10.1 (1.8)	<0.001

Conclusions: In patients with advanced *ALK+* NSCLC, frontline treatment with BRG was associated with significant and clinically important gains in QA-PFS and Q-TWiST compared to CRZ.

Clinical trial identification: NCT02737501.

Editorial acknowledgement: Medical writing support provided by Jane Kondejewski, PhD of SNELL Medical Communication, Inc.

Legal entity responsible for the study: Takeda Development Center Americas, Inc.

Funding: Takeda Development Center Americas, Inc.

Disclosure: M.R. Garcia Campelo: Financial Interests, Institutional, Advisory Board: AstraZeneca, BMS, Novartis, Eli Lilly, MSD, Janssen, Sanofi, Pfizer, Takeda, Roche; Financial Interests, Institutional, Sponsor/Funding, Research funding: BMS; Financial Interests, Institutional, Speaker's Bureau: AstraZeneca, BMS, Novartis, Eli Lilly, MSD, Janssen, Sanofi, Pfizer, Takeda, Roche. Y. Wan, M. Lin, T. Chen, J. Shen, P. Zhang, M.J. Humphries: Financial Interests, Institutional, Full or part-time Employment: Takeda Development Center Americas, Inc. D.R. Camidge: Financial Interests, Institutional, Advisory Board: 14ner/Elevation, AbbVie, Achilles, Amgen, Anchiarno, Anheart, Apollomics, Archer, AstraZeneca, BeiGene, BeyondSpring, Bio-Thera, Blueprint, BMS, CBT Pharmaceuticals, Daiichi Sankyo, Eisai, Elevation, Eli Lilly, EMD Serono, G1 Therapeutics, GSK, Helssin, Hengrui, Janssen, Kestrel, Medtronic, Mersana, Nuvalent, Onkure, Pfizer, Puma, Qilu, Ribon, Roche/Genentech, Sanofi, Seattle Genetics, Takeda, Turning Point; Financial Interests, Institutional, Sponsor/Funding, Research funding: Inivata; Financial Interests, Institutional, Invited Speaker, Company-sponsored trial at institution (PI role): AbbVie, AstraZeneca, Dizal, Inhibrx, Karyopharm, Pfizer, Phosplatin, Psioxus, Rain, Roche/Genentech, Seattle Genetics, Takeda, Turning Point.

https://doi.org/10.1016/j.annonc.2022.07.1280

1158P Study of patients' characteristics associated with osimertinib outcomes upfront or in following lines in EGFR-positive NSCLC

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Background: In first line (L1) for *EGFR*-mutated (mEGFR) advanced NSCLC (aNSCLC), osimertinib (osi) has been the preferred option since 2018. First generation anti-EGFR TKI (1G) alone followed by osi, or 1G + anti-angiogenic or 1G + chemotherapy are other options. We aimed to assess the subgroups of patients (pts) that do not benefit from 1G alone compared with osimertinib L1 in mEGFR aNSCLC.

Methods: Retrospective international study including pts with mEGFR aNSCLC treated with either osi or the sequence of 1G followed by osi (seq group). Primary endpoint was the PFS of the global strategy (PFSglob) defined as the time between L1 start and progression after L2 treatment or death. Subgroups analyses included pts with high tumour burden (high-TM; > 3 metastatic sites and/or central nervous system (CNS) involvement), poor performance status (PS), and T790M negative (seq subgroup only).

Results: A total of 235 pts were included: 104 in the seq group, 118 in the osi L1 group. 15 had *T790M* negative at PD after 1G, they received osi as a therapeutic test. From these pts, 222 had an exon19 or 21 *EGFR* mut, 13 had uncommon m*EGFR*. Mean age was 65 years, 64% were female, and 60% never smokers. Pts from the osi L1 group had poorer PS (23% vs 10%), higher rate of co-mutations (23% vs 19%) and more CNS involvement (47% vs 19%). After a median (m) follow up of 30.6 months in the exon 19 and 21 population, mPFSglob was 27.4 mo (23.0-31.0) and mPFS L1 was 15.5mo (13.7-18.4) Table. The sequence was associated with shorter PFS L1 compared with osi L1 particularly in high-TM (10.5 mo vs 17.1 mo, p<0.0001); PFS was numerically shorter in poor PS (≥2) population (11.0 mo vs 15.6 mo, p=0.1).

Table: 1158P

Osimertinib L1 group	**ORR L1**	**PFS L1, 18mo rate (95%CI)**	**PFSglob, 36mo rate (95%CI)**
Exon 19 and 21 mut (n=118)	84.3%	46.4% (37.0-58.1)	36.8% (19.9-68.2)
CNS involvement (n=55)	92.6%	42.2% (28.3-62.7)	20.6% (4.7-89.0)
Poor PS (n=23)	90.5%	46.4% (27.7-77.8)	55.1% (35.5-85.5)
Sequence group			
Exon 19 and 21 mut (n=104)	87.4%	41.8% (33.2-52.5)	37.8% (29.1-49.1)
CNS involvement (n=20)	90.0%	25% (11.7-53.4)	16.6% (5.2-53.0)
Poor PS (n=9)	88.9%	13.9% (2.3-83.6)	0%
	ORR L2	**PFS L1, 18mo rate (95%CI)**	**PFS L2, mo (95%CI)**
T790M analysis from the sequence group			
T790M positive at L1 PD (n=82)	63.2%	39.0% (29.8-51.1)	10.3 (8.8-14.1)
T790M negative at L1 PD (n=9)	83.3%	44.4% (21.4-92.3)	12.8 (6.7-Not Reached)

Conclusions: 1G TKI followed by osi seemed to be detrimental compared with os L1 for pts with high-TM or poor PS mEGFR aNSCLC. In this population, the intensification of L1 treatment with osimertinib or a combination of 1G with anti-angiogenic or chemotherapy could be the better option in the first-line setting. Updated results will be presented at the congress.

Legal entity responsible for the study: Institut Gustave Roussy.

Funding: Has not received any funding

Disclosure: E. Auclin: Financial Interests, Personal, Advisory Board: Sanofi, Amgen. N. Girard: Financial Interests, Personal, Invited Speaker: AstraZeneca, BMS, MSD, Roche, Pfizer, Mirati, Amgen, Novartis, Sanofi; Financial Interests, Personal, Advisory Board: AstraZeneca, BMS, MSD, Roche, Pfizer, Janssen, Boehringer, Novartis, Sanofi, AbbVie, Amgen, Lilly, Grunenthal, Takeda, Owkin; Financial Interests, Institutional, Research Grant, Local: Roche, Sivan, Janssen; Financial Interests, Institutional, Funding: BMS; Non-Financial Interests, Officer, International Thymic malignancy interest group, president: ITMIG; Other, Other, Family member is an employee: AstraZeneca. M.T. Moran Bueno: Financial Interests, Personal, Advisory Board, Advisory Role: AstraZeneca, Boehringer Ingelheim, BMS; Financial Interests, Personal, Advisory Board, Advisory role: Roche. B. Besse: Financial Interests, Institutional, Funding: 4D Pharma, AbbVie, Amgen, Aptitude Health, AstraZeneca, BeiGene, Blueprint Medicines, Boehringer Ingelheim, Celgene, Cergentis, Cristal Therapeutics, Daiichi Sankyo, Eli Lilly, GSK, Janssen, Onxeo, Ose Immunotherapeutics, Pfizer, Roche-Genentech, Sanofi, Takeda, Tolero Pharmaceuticals; Financial Interests, Institutional, Research Grant: Chugai Pharmaceutical, EISAI, Genzyme Corporation, Inivata, Ipsen, Turning Point Therapeutics. L. Mezquita: Financial Interests, Personal, Advisory Board: Takeda, AstraZeneca, Roche; Financial Interests, Personal, Invited Speaker: Roche, BMS, AstraZeneca, Takeda; Financial Interests, Personal, Research Grant, SEOM Beca Retorno 2019: BI; Financial Interests, Personal, Research Grant, ESMO TR Research Fellowship 2019: BMS; Financial Interests, Institutional, Research Grant, COVID research Grant: Amgen; Financial Interests, Institutional, Invited Speaker: Inivata, Stilla. All other authors have declared no conflicts of interest.

https://doi.org/10.1016/j.annonc.2022.07.1281

1159P The immune checkpoint inhibitors induced endocrinopathies and their effect on prognosis in advanced non-small cell lung cancer patients

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Background: Immune checkpoint inhibitors (ICIs) had become standard therapy in the management of advanced non-small cell lung cancer (NSCLC). Despite the improvements in survival, ICIs have unique immune-related adverse events (irAEs), which