SUPPLEMENTARY MATERIALS

Clinical characteristics and treatment patterns of patients with NTRK fusion–positive solid tumors: A multisite cohort study at US academic cancer centers

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Supplementary Table 1. Genetic alterations

Genetic Alteration, n (%)	Non-TRKi (N=27)	TRKi (N=28)	All (N=55)
TP53	6 (22%)	7 (25%)	13 (24%)
CDKN2A	4 (15%)	4 (14%)	8 (15%)
NTRK1	7 (26%)	1 (4%)	8 (15%)
ARID1A	4 (15%)	3 (11%)	7 (13%)
PTEN	3 (11%)	4 (14%)	7 (13%)
ALK	2 (7%)	3 (11%)	5 (9%)
ATM	4 (15%)	1 (4%)	5 (9%)
BRCA2	2 (7%)	3 (11%)	5 (9%)
KRAS	4 (15%)	1 (4%)	5 (9%)
PIK3CA	3 (11%)	2 (7%)	5 (9%)
AR	2 (7%)	2 (7%)	4 (7%)
ASXL1	3 (11%)	1 (4%)	4 (7%)
MSH6	2 (7%)	2 (7%)	4 (7%)
NTRK3	3 (11%)	1 (4%)	4 (7%)
PTCH1	4 (15%)	0 (0%)	4 (7%)
RNF43	4 (15%)	0 (0%)	4 (7%)
STK11	3 (11%)	1 (4%)	4 (7%)
ATRX	1 (4%)	2 (7%)	3 (5%)
CCNE1	1 (4%)	2 (7%)	3 (5%)
CDKN2B	0 (0%)	3 (11%)	3 (5%)
CTNNB1	3 (11%)	0 (0%)	3 (5%)
FBXW7	2 (7%)	1 (4%)	3 (5%)
GNAS	2 (7%)	1 (4%)	3 (5%)

KDR	2 (7%)	1 (4%)	3 (5%)
KEAP1	1 (4%)	2 (7%)	3 (5%)
KIT	2 (7%)	1 (4%)	3 (5%)
MET	1 (4%)	2 (7%)	3 (5%)
MLH1	2 (7%)	1 (4%)	3 (5%)
MSH3	2 (7%)	1 (4%)	3 (5%)
NOTCH3	2 (7%)	1 (4%)	3 (5%)

Supplementary Table 2. Radiation therapy

	Non-TRKi (N=27)	TRKi (N=28)	All (N=55)
Number of radiation cycles, n (%)			
1 cycle	27 (100%)	12 (43%)	39 (71%)
2 cycles	5 (19%)	8 (29%)	13 (24%)
3 cycles	1 (4%)	5 (18%)	6 (11%)
4+ cycles	1 (4%)	4 (14%)	5 (9%)

Supplementary Table 3. Timing of *NTRK* testing among patients receiving 1L therapy (n=46)

Variable, n (%)	Pre-TRKi* (n=16)	Post-TRKi$^{\sigma}$ (n=30)	All (n=46)
Patients receiving *NTRK* testing prior to 1L therapy	3 (19%)	17 (57%)	20 (43%)

* Therapies received prior to FDA approval of Larotrectinib (11/2018)

$^{\sigma}$ Therapies received after FDA approval of Larotrectinib (11/2018)

Supplementary Table 4. Treatment patterns

Therapy type, n (%)	Pre-TRKi*	Post-TRKi$^{\sigma}$
First-line Therapy	**N=16**	**N=30**
TRKi	0 (0%)	10 (33%)
DoT (days), median (IQR)	NA	610 (182-764)
Other therapies	16 (100%)	20 (67%)
DoT (days), median (IQR)	181.5 (67-642)	207.5 (42-539)

Chemotherapy	12 (75%)	11 (37%)
DoT (days), median (IQR)	148 (67-378)	146 (42-849)
Other targeted therapy	3 (19%)	3 (10%)
DoT (days), median (IQR)	1152 (721-1395)	122 (20-452)
Immunotherapy	1 (6%)	2 (7%)
DoT (days), median (IQR)	21 (21-21)	389.5 (363-416)
Chemotherapy + other targeted therapy	0 (0%)	1 (3%)
DoT (days), median (IQR)	NA	14 (14-14)
Chemotherapy + immunotherapy	0 (0%)	3 (10%)
DoT (days), median (IQR)	NA	464 (105-1146)
Second-line Treatment	**N=10**	**N=23**
TRKi	0 (0%)	11 (48%)
DoT (days), median (IQR)	NA	103 (47-292)
Other therapies	10 (100%)	12 (52%)
DoT (days), median (IQR)	100 (63-348)	101 (28-178)
Chemotherapy	6 (60%)	5 (22%)
DoT (days), median (IQR)	77.5 (59-108)	101 (54-119)
Other targeted therapy	2 (20%)	2 (9%)
DoT (days), median (IQR)	646.5 (68-1225)	125 (28-222)
Immunotherapy	2 (20%)	3 (13%)
DoT (days), median (IQR)	296.5 (200-393)	124 (0-237)
Chemotherapy + TRKi	0 (0%)	1 (4%)
DoT (days), median (IQR)	NA	35 (35-35)
Chemotherapy + immunotherapy	0 (0%)	1 (4%)
DoT (days), median (IQR)	NA	43 (43-43)
Third-line Treatment	**N=5**	**N=12**
TRKi	0 (0%)	2 (17%)
DoT (days), median (IQR)	NA	79 (44-114)
Other therapies	5 (100%)	10 (83%)
DoT (days), median (IQR)	92 (63-210)	33 (12-112)
Chemotherapy	3 (60%)	6 (50%)
DoT (days), median (IQR)	63 (1-92)	33 (12-112)
Other targeted therapy	1 (20%)	0 (0%)
DoT (days), median (IQR)	472 (472-472)	NA
Immunotherapy	0 (0%)	2 (17%)
DoT (days), median (IQR)	NA	119 (21-217)
Chemotherapy + other targeted therapy	1 (20%)	2 (17%)
DoT (days), median (IQR)	210 (210-210)	39.5 (9-70)
Fourth-line Treatment	**N=4**	**N=7**
TRKi	0 (0%)	2 (29%)

DoT (days), median (IQR)	NA	660.5 (421-900)
Other therapies	4 (100%)	5 (71%)
DoT (days), median (IQR)	271 (191-364)	73 (72-82)
Chemotherapy	0 (0%)	1 (14%)
DoT (days), median (IQR)	NA	21 (21-21)
Other targeted therapy	2 (50%)	1 (14%)
DoT (days), median (IQR)	284 (142-426)	72 (72-72)
Immunotherapy	1 (25%)	1 (14%)
DoT (days), median (IQR)	240 (240-240)	82 (82-82)
Chemotherapy + other targeted therapy	1 (25%)	2 (29%)
DoT (days), median (IQR)	302 (302-302)	124.5 (73-176)

DoT, duration of therapy

* Therapies received prior to FDA approval of Larotrectinib (11/2018)

s Therapies received after FDA approval of Larotrectinib (11/2018)

Supplementary Table 5. Baseline demographics among patients receiving first-line therapy (n=46)

	Pre-TRKi*		Post-TRKi$^{\sigma}$		
Variable, n (%)	TRKi N=0	Other therapies N=16	TRKi N=10	Other therapies N=20	All N=46
Age, mean years (SD)	NA	48.1 (17.7)	49.8 (25.0)	55.6 (20.3)	51.7 (20.4)
Gender					
Female	NA	10 (62%)	2 (20%)	12 (60%)	24 (52%)
Ethnicity					
Hispanic	NA	2 (12%)	1 (10%)	5 (25%)	8 (17%)
Non-Hispanic	NA	14 (88%)	9 (90%)	15 (75%)	38 (83%)
Race					
White	NA	15 (94%)	7 (70%)	12 (60%)	34 (74%)
Black	NA	0 (0%)	1 (10%)	1 (5%)	2 (4%)
Other	NA	1 (6%)	2 (20%)	3 (15%)	6 (13%)
Unknown	NA	0 (0%)	0 (0%)	2 (10%)	2 (4%)
Plan Type at Diagnosis*					
Commercial	NA	10 (62%)	3 (30%)	13 (65%)	26 (57%)
Medicaid	NA	1 (6%)	1 (10%)	0 (0%)	2 (4%)
Medicare	NA	3 (19%)	4 (40%)	6 (30%)	13 (28%)
Uninsured/Self-pay	NA	0 (0%)	1 (10%)	0 (0%)	1 (2%)
Other	NA	0 (0%)	1 (10%)	1 (5%)	2 (4%)
Unknown	NA	3 (19%)	0 (0%)	0 (0%)	3 (7%)
Comorbidities					
Myocardial infarction	NA	1 (6%)	0 (0%)	0 (0%)	1 (2%)
Congestive heart failure	NA	1 (6%)	0 (0%)	1 (5%)	2 (4%)
Chronic Pulmonary Disease	NA	2 (12%)	2 (20%)	0 (0%)	4 (9%)
Dementia	NA	0 (0%)	0 (0%)	1 (5%)	1 (2%)
Diabetes w/o chronic complications	NA	1 (6%)	1 (10%)	2 (10%)	4 (9%)
Hemiplegia or paraplegia	NA	1 (6%)	0 (0%)	0 (0%)	1 (2%)
Renal Disease	NA	0 (0%)	1 (10%)	0 (0%)	1 (2%)
Mild Liver Disease	NA	0 (0%)	0 (0%)	2 (10%)	2 (4%)
Peptic Ulcer Disease	NA	1 (6%)	0 (0%)	0 (0%)	1 (2%)
Rheumatologic Disease	NA	1 (6%)	0 (0%)	0 (0%)	1 (2%)
None	NA	11 (69%)	7 (70%)	15 (75%)	33 (72%)

Supplementary Table 6. Cancer characteristics among patients receiving first-line therapy (n=46)

	Pre-TRKi*		Post-TRKiσ		
	TRKi N=0	Other therapies N=16	TRKi N=10	Other therapies N=20	All N=46
Cancer type, n (%)					
Brain	NA	4 (25%)	0 (0%)	2 (10%)	6 (13%)
Breast	NA	1 (6%)	0 (0%)	2 (10%)	3 (7%)
Colorectal	NA	1 (6%)	0 (0%)	5 (25%)	6 (13%)
Endometrial	NA	1 (6%)	0 (0%)	0 (0%)	1 (2%)
Gastric	NA	1 (6%)	0 (0%)	0 (0%)	1 (2%)
Salivary gland	NA	1 (6%)	4 (40%)	1 (5%)	6 (13%)
Lung	NA	1 (6%)	2 (20%)	4 (20%)	7 (15%)
Melanoma	NA	0 (0%)	0 (0%)	1 (5%)	1 (2%)
Other	NA	0 (0%)	0 (0%)	1 (5%)	1 (2%)
Ovarian	NA	1 (6%)	0 (0%)	1 (5%)	2 (4%)
Pancreatic	NA	0 (0%)	0 (0%)	1 (5%)	1 (2%)
Prostate	NA	1 (6%)	0 (0%)	0 (0%)	1 (2%)
Sarcoma	NA	3 (19%)	1 (10%)	0 (0%)	4 (9%)
Thyroid	NA	1 (6%)	3 (30%)	2 (10%)	6 (13%)
Stage at cancer diagnosis					
I	NA	4 (27%)	2 (20%)	2 (10%)	8 (18%)
II	NA	1 (7%)	1 (10%)	2 (10%)	4 (9%)
III	NA	5 (33%)	0 (0%)	5 (25%)	10 (22%)
IV	NA	3 (20%)	5 (50%)	10 (50%)	18 (40%)
Unknown	NA	2 (13%)	2 (20%)	1 (5%)	5 (11%)
Stage at *NTRK* testing					
I	NA	0 (0%)	1 (10%)	0 (0%)	1 (2%)
II	NA	1 (6%)	0 (0%)	1 (5%)	2 (4%)
III	NA	2 (12%)	0 (0%)	5 (25%)	7 (15%)

IV	NA	13 (81%)	7 (70%)	13 (65%)	33 (72%)
Unknown	NA	0 (0%)	2 (20%)	1 (5%)	3 (7%)
ECOG score at initial cancer diagnosis					
0	NA	9 (56%)	4 (40%)	9 (45%)	22 (48%)
1	NA	3 (19%)	3 (30%)	8 (40%)	14 (30%)
2	NA	0 (0%)	2 (20%)	1 (5%)	3 (7%)
Unknown	NA	4 (25%)	1 (10%)	2 (10%)	7 (15%)
Site of metastases					
Lung	NA	4 (25%)	5 (50%)	4 (20%)	13 (28%)
Liver	NA	3 (19%)	2 (20%)	7 (35%)	12 (26%)
Brain	NA	4 (25%)	1 (10%)	3 (15%)	8 (17%)
Bone	NA	3 (19%)	3 (30%)	6 (30%)	12 (26%)
Other	NA	9 (56%)	1 (10%)	7 (35%)	17 (37%)
None	NA	3 (19%)	2 (20%)	4 (20%)	9 (20%)