

Oncogenesis of TRK Fusions—Tumor Agnostic

Resource	Address
Amatu A, Sartore-Bianchi A, Bencardino K, Pizzutilo EG, Tosi F, Siena S. Tropomyosin receptor kinase (TRK) biology and the role of <i>NTRK</i> gene fusions in cancer. <i>Ann Oncol</i> . 2019;30(suppl 8):viii5-viii15.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6859819/
Cocco E, Scaltriti M, Drilon A. NTRK fusion-positive cancers and TRK inhibitor therapy. <i>Nat Rev Clin Oncol</i> . 2018;15:731-747.	https://www.nature.com/articles/s41571-018-0113-0
Kheder ES, Hong DS. Emerging targeted therapy for tumors with <i>NTRK</i> fusion proteins. <i>Clin Cancer Res</i> . 2018;24:5807-5814.	https://pubmed.ncbi.nlm.nih.gov/29986850/
Lange AM, Lo HW. Inhibiting TRK proteins in clinical cancer therapy. <i>Cancers (Basel)</i> : 2018;10:105.	https://pubmed.ncbi.nlm.nih.gov/29617282/
Vaishnavi A, Le AT, Doebele RC. TRKing down an old oncogene in a new era of targeted therapy. <i>Cancer Discov</i> . 2015;5:25-34.	https://pubmed.ncbi.nlm.nih.gov/25527197/

NCCN Guideline Recommendations to Optimize Treatment for TRK Fusion Positive Cancers

Resource	Address
National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Colon Cancer. Version 2.2021. Accessed August 19, 2021.	https://www.nccn.org/professionals/physician_gls/pdf/colon.pdf
National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Non-Small Cell Lung Cancer. Version 5.2021. Accessed August 19, 2021.	https://www.nccn.org/professionals/physician_gls/pdf/nscl.pdf

TRK Inhibition: Targeted Therapy

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<p>Bhangoo M, Sigal D. TRK inhibitors: Clinical development of larotrectinib. <i>Curr Oncol Rep.</i> 2019;21:14.</p>	<p>https://pubmed.ncbi.nlm.nih.gov/30715603/</p>
<p>Cho BC, Doebele RC, Lin J, et al. Phase 1/2 TRIDENT-1 study of repotrectinib in patients with <i>ROS1+</i> or <i>NTRK+</i> advanced solid tumors. <i>J Thoracic Oncol.</i> 2021;16:S174-S175.</p>	<p>https://www.jto.org/article/S1556-0864(21)00293-8/fulltext</p>
<p>Demetri GD, Paz-Ares L, Farago AF, et al. Efficacy and safety of entrectinib in patients with NTRK fusion-positive tumours: Pooled analysis of STARTRK-2, STARTRK-1, and ALKA-373-001. <i>Ann Oncol.</i> 2018;29(suppl 9):ix175.</p>	<p>https://www.annalsofoncology.org/article/S0923-7534(19)43453-4/fulltext</p>
<p>Doebele RC, Drilon A, Paz-Ares L, et al. Entrectinib in patients with advanced or metastatic NTRK fusion-positive solid tumours: Integrated analysis of three phase 1-2 trials. <i>Lancet Oncol.</i> 2020;21:271-282.</p>	<p>https://pubmed.ncbi.nlm.nih.gov/31838007/</p>
<p>Drilon AE, DuBois SG, Farago AF, et al. Activity of larotrectinib in TRK fusion cancer patients with brain metastases or primary central nervous system tumors. <i>J Clin Oncol.</i> 2019;37(15 suppl):2006.</p>	<p>https://ascopubs.org/doi/abs/10.1200/jco.2019.37.15_suppl.2006</p>
<p>Drilon A, Nagasubramanian R, Blake JF, et al. A next-generation TRK kinase inhibitor overcomes acquired resistance to prior TRK kinase inhibition in patients with TRK fusion-positive solid tumors. <i>Cancer Discov.</i> 2017;7:963-972.</p>	<p>https://pubmed.ncbi.nlm.nih.gov/28578312/</p>
<p>Drilon A, Laetsch TW, Kummar S, et al. Efficacy of larotrectinib in TRK fusion-positive cancers in adults and children. <i>N Engl J Med.</i> 2018;378:731-739.</p>	<p>https://www.nejm.org/doi/full/10.1056/nejmoa1714448</p>
<p>Food and Drug Administration. FDA approves larotrectinib for solid tumors with NTRK gene fusions [press release]. November 26, 2018. Accessed July 27, 2021</p>	<p>https://www.fda.gov/drugs/fda-approves-larotrectinib-solid-tumors-ntrk-gene-fusions</p>

<p>Food and Drug Administration. FDA approves entrectinib for NTRK solid tumors and ROS-1 NSCLC [press release]. August 15, 2019. Accessed July 27, 2021.</p>	<p>https://www.fda.gov/drugs/resources-information-approved-drugs/fda-approves-entrectinib-ntk-solid-tumors-and-ros-1-nsclc</p>
<p>Hong DS, DuBois SG, Kummar S, et al. Larotrectinib in patients with TRK fusion-positive solid tumours: A pooled analysis of three phase 1/2 clinical trials. <i>Lancet Oncol.</i> 2020;21:531-540.</p>	<p>https://pubmed.ncbi.nlm.nih.gov/32105622/</p>
<p>Hyman D, Kummar S, Farago A, et al. Phase I and expanded access experience of LOXO-195 (BAY 2731954), a selective next-generation TRK inhibitor (TRKi). <i>Cancer Res.</i> 2019;79(13 suppl):CT127.</p>	<p>https://cancerres.aacrjournals.org/content/79/13_Supplement/CT127</p>
<p>Lange AM, Lo HW. Inhibiting TRK proteins in clinical cancer therapy. <i>Cancers (Basel)</i>: 2018;10:105.</p>	<p>https://pubmed.ncbi.nlm.nih.gov/29617282/</p>
<p>Papadopoulos KP, Borazanci E, Shaw AT, et al. U.S. phase I first-in-human study of taletrectinib (DS-6051b/AB-106), a ROS1/TRK inhibitor, in patients with advanced solid tumors. <i>Clin Cancer Res.</i> 2020;26:4785-4794.</p>	<p>https://pubmed.ncbi.nlm.nih.gov/32591465/</p>
<p>Rolfo CD, DeBraud FG, Doebele RC, et al. Efficacy and safety of entrectinib in patients (pts) with NTRK-fusion positive (NTRK-fp) solid tumors: An updated integrated analysis. <i>J Clin Oncol.</i> 2020;38(15 suppl):3605.</p>	<p>https://ascopubs.org/doi/abs/10.1200/JCO.2020.38.15_suppl.3605</p>