



# Consensus CASES – Pathways in *NTRK* Fusion- Positive Cancers

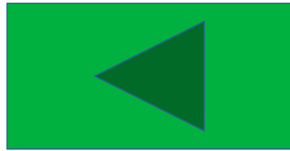
September 14, 2021

OneOncology

# How to Navigate This Report










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## STUDY OBJECTIVE

To gain advisors' perspectives on

- > Testing protocols and treatment pathways for *NTRK* fusion-positive cancers

# Report Snapshot: Session Overview



A moderated roundtable discussion was held with oncologists from the OneOncology network in a virtual setting on **September 14, 2021**

Disease state and data presentations were led by **Dr Lee Schwartzberg** from The West Clinic in conjunction with content developed by the Aptitude Health clinical team

Insights were obtained on **testing protocols and treatment pathways for *NTRK* fusion-positive cancers** in the community setting

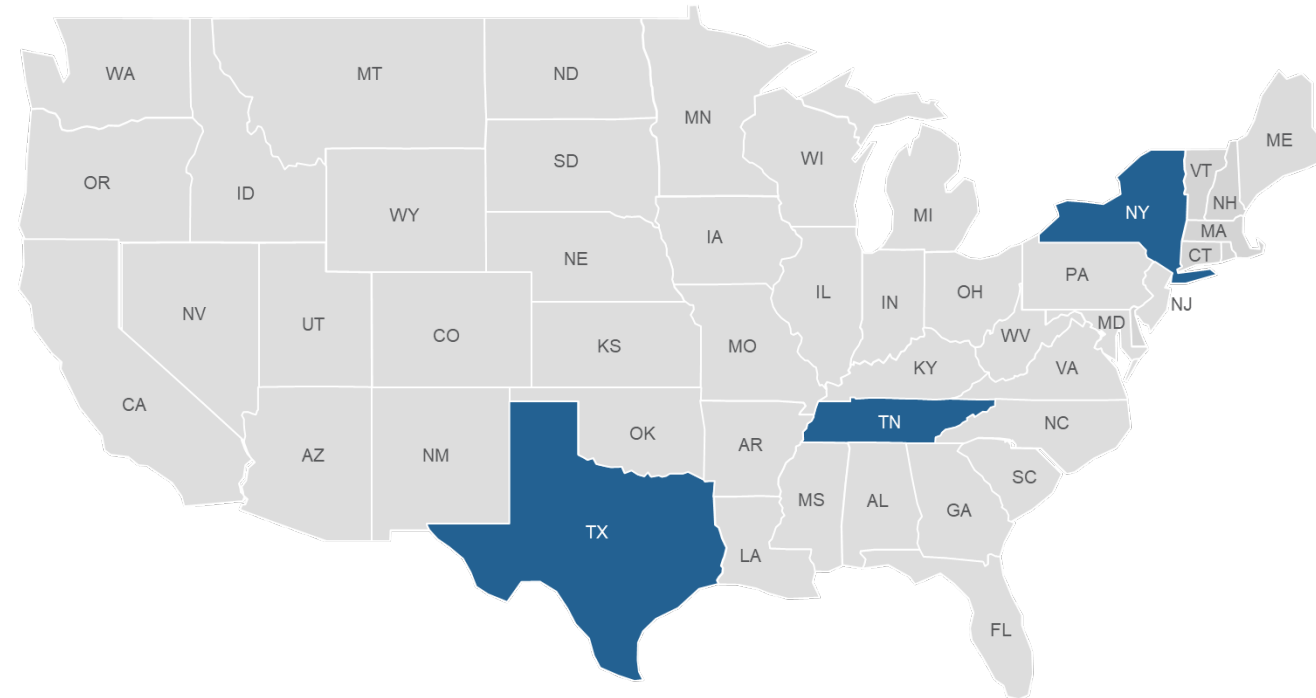
Data collection was accomplished through a **premeeting questionnaire** of 33 **physicians** and in-depth **moderated discussion** with 11 physicians.

# Report Snapshot: Attendee Overview



- > The group of advisors comprised 11 oncologists from New York, Tennessee, and Texas

INSTITUTION	CITY	STATE
The Center for Cancer and Blood Disorders	Fort Worth	TX
New York Cancer & Blood Specialists	Port Jefferson	NY
New York Cancer & Blood Specialists	Bronx	NY
West Cancer Center	Memphis	TN
Tennessee Oncology	Chattanooga	TN
Tennessee Oncology	Nashville	TN
Tennessee Oncology	Shelbyville	TN
The West Clinic	Germantown	TN



# Report Snapshot: Agenda



Time (ET)	Topic
6.00 PM – 6.15 PM (15 min)	Introduction and ARS Questions
6.15 PM – 6.30 PM (15 min)	<i>NTRK</i> Gene Fusions as Oncogenic Drivers
6.30 PM – 6.45 PM (15 min)	Treatment of Thyroid/Salivary Gland Cancers
6.45 PM – 7.30 PM (45 min)	Consensus Pathway Discussion: Thyroid/Salivary Gland Cancers
7.30 PM – 7.45 PM (15 min)	Break
7.45 PM – 8.00 PM (15 min)	Treatment of Lung Cancer
8.00 PM – 8.45 PM (45 min)	Consensus Pathway Discussion: Lung Cancer
8.45 PM – 9.00 PM (15 min)	Key Takeaways and Meeting Evaluation



# Key Insights and Discussion Summary

Thyroid/Salivary Gland Cancers



## INSIGHTS

*“The full RAI-refractory patient, I do test them. I just I haven’t seen one.”*

1. Treatment success in thyroid (2022)

The overall success rate is very low. This is not necessarily because the disease is so aggressive, but because of the nature of the disease. The overall success rate is very low. This is not necessarily because the disease is so aggressive, but because of the nature of the disease. The overall success rate is very low. This is not necessarily because the disease is so aggressive, but because of the nature of the disease.

2. Data needed to predict from 2022 in thyroid

There are a lot of things that have been done, nothing is really new. The overall success rate is very low. This is not necessarily because the disease is so aggressive, but because of the nature of the disease. The overall success rate is very low. This is not necessarily because the disease is so aggressive, but because of the nature of the disease.

## INSIGHTS

*“For OncoEMR, we have an ordering system where we have to go down and pick ‘Other molecular’ and then it*

*the system returns that what we need. This is not necessarily always the best possible answer, so we have manual ordering.”*

*“I would not use significant prognostic benefit. I think when I order a test, I would rather use a guideline evidence rather than using ICI or PD-1, and I would use what the disease has said at 1 year. I believe as that ICI is important I think is significant benefit with the treatment, and people going from something uninterpretable.”*

*“This is all a lot of things have been done, nothing is better than RCTs and things. It would really help with how RCTs are performed for the patients.”*

*“I would be a little skeptical. I would not be one of the first ones to move toward an ICI or something like that. I want something that's clear and that we can trust that we'll use.”*

*“The benefits are not very clear. I think a benefit with ICI or PD-1 would be something that I would be looking at.”*

*“I would not use that, that's clear, but in this disease with ICI a benefit comes by, so you do have to use some surrogate of efficacy. So, I do think that a lot of people have that surrogate kind of data, so that what's going to start driving the use of any agent. ICI is not sufficient.”*

## INSIGHTS

*"I really think the data is very robust. When we have a targetable, an actual mutation, we'd like to prefer that. And*

1. Treatment success in thyroid (2022)

The overall survival data was very robust. This is not necessarily because this is thyroid cancer, it's not really overall survival. I think what was significant was that we saw that when you have a mutation, you should prefer that over a treatment approach where that's using 100 or 100%, and I think we think the overall survival rate of 1 year, I think it's about 100% is important. I think it's significant because with the treatment, and overall being that something is important.

2. Data needed to confirm from 2022 in thyroid

That's all, a lot of things have been done, getting a better idea of what's going on and what's going on with the thyroid cancer. I think what was important was that we saw that when you have a mutation, you should prefer that over a treatment approach where that's using 100 or 100%, and I think we think the overall survival rate of 1 year, I think it's about 100% is important. I think it's significant because with the treatment, and overall being that something is important.



# Key Insights and Discussion Summary

Lung Cancer

## INSIGHTS

*"In my practice, like I'm testing with next-generation sequencing at the time of diagnosis, especially the ones that*

1. Treatment success in frontline EGFR

The overall survival that we see with EGFR is not necessarily disease-free or overall survival, so we need overall survival. I would prefer use a biomarker endpoint rather than using OS or PFS, and I would say that the disease-free rate at 1 year, especially at that 12 is important. There is significant toxicity with the treatment, and people drop their treatment accordingly.

2. Data needed to switch from EGFR to frontline

That's all a lot of things have been said, nothing is better than EGFR and EGFR. It's really hard with how EGFR performs for us patients. I would be a little bit more... I would not be one of the first ones to move based on PFS or anything like that. I want something that's clear and that we can trust that we'll see. The toxicity we see with EGFR... there is a hazard rate of EGFR or better would be something that I would be looking at. Overall survival rate, that's what we're looking at. There is a hazard rate of EGFR or better would be something that I would be looking at. In my practice, like I'm testing with next-generation sequencing at the time of diagnosis, especially the ones that... I would be a little bit more... I would not be one of the first ones to move based on PFS or anything like that. I want something that's clear and that we can trust that we'll see. The toxicity we see with EGFR... there is a hazard rate of EGFR or better would be something that I would be looking at. Overall survival rate, that's what we're looking at. There is a hazard rate of EGFR or better would be something that I would be looking at.

## INSIGHTS

*“So this is really nice data, and if we see a patient, we definitely use NTRK as first line so we can use the resistant*

1. Treatment success in frontline (N=202)

The overall survival data was very good. This is not necessarily because this is a highly sensitive, or an early-stage setting. I think what is really important here is that we saw a significant improvement in overall survival with the treatment, and we saw that this was not just a statistical artifact. I think what is really important here is that we saw a significant improvement in overall survival with the treatment, and we saw that this was not just a statistical artifact. I think what is really important here is that we saw a significant improvement in overall survival with the treatment, and we saw that this was not just a statistical artifact.

2. Data needed to confirm from NTRK in frontline

What are all the things that we need to know? Getting a better idea of the overall survival data, and the overall survival data, and the overall survival data. I think what is really important here is that we saw a significant improvement in overall survival with the treatment, and we saw that this was not just a statistical artifact. I think what is really important here is that we saw a significant improvement in overall survival with the treatment, and we saw that this was not just a statistical artifact.



# Key Insights and Discussion Summary

Pathway Consensus



## INSIGHTS

*[Regarding the utility of pathways in oncology] "I think overall they can be very helpful. They can help confirm a diagnosis*

1. Treatment success in frontline (2019)

The overall success rate was very high. This is not necessarily because the overall success rate was high, but because the overall success rate was high. I think overall they can be very helpful. They can help confirm a diagnosis and help with the treatment. I think overall they can be very helpful. They can help confirm a diagnosis and help with the treatment. I think overall they can be very helpful. They can help confirm a diagnosis and help with the treatment.

2. Data needed to confirm from NCCN in frontline

This is a very good thing to have. I think overall they can be very helpful. They can help confirm a diagnosis and help with the treatment. I think overall they can be very helpful. They can help confirm a diagnosis and help with the treatment. I think overall they can be very helpful. They can help confirm a diagnosis and help with the treatment. I think overall they can be very helpful. They can help confirm a diagnosis and help with the treatment.





# Advisor Key Takeaways

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## ADVISOR

> Using RNA testing for *NTRK* mutations in thyroid cancer

- There is a better understanding of sequencing strategies
- There is a better understanding of the value of RNA testing
- There is a better understanding of the value of RNA testing
- There is a better understanding of the value of RNA testing

- There is a better understanding of some of the other options
- There is a better understanding of the value of RNA testing
- There is a better understanding of the value of RNA testing
- There is a better understanding of the value of RNA testing

- It is good to have some information and advice coming from the provider for sequencing

- There is a lot of good options for testing the DNA and RNA and managing with some of the other profiles and good response rates
- Sequencing is an issue

## ADVISOR

> This reinforces the RNA based testing approach

- The sequencing strategy allows the use of some different options besides NGS and with a good result

- The hope is that some of these sequencing options will get added into practice and hopefully improve the results

- This is interesting to learn about all these sequencing options, especially the targeted options
- It is an option coming up in the future. The only issue will be to learn how to sequence these things

- NGS is the standard



# Thyroid Cancer-Specific Questions

# Nineteen Percent of the Advisors Have Treated $\geq 4$ RAI-R mDTC Patients in the Past 12 Months; Around One-Quarter of the Advisors Treated an *NTRK* Fusion-Positive mDTC Patient

Approximately how many patients with RAI-R metastatic DTC (mDTC) have you treated in the

Approximately how many *NTRK* fusion-positive mDTC patients have you ever treated? (N = 31)



# The Majority of Advisors Test for *NTRK* Gene Fusions Upfront in mDTC; 16% of Advisors Do Not Test for *NTRK* Fusions



FOR EXAMPLE PURPOSES ONLY

# For 58% of Advisors, Most or All of Their RAI-R mDTC Patients Receive *NTRK* Fusion Testing



FOR EXAMPLE PURPOSES ONLY

# Just Over Half of the Advisors Need to Specifically Request *NTRK* Fusion Testing

FOR EXAMPLE PURPOSES ONLY

# Most Advisors Outsource *NTRK* Gene Fusion Testing in mDTC; the Majority of These Advisors Use DNA-Based Testing



FOR EXAMPLE PURPOSES ONLY



# In mDTC, 58% of the Advisors Perform Tissue-Based Testing First, Followed by a Liquid Biopsy Where Appropriate



FOR EXAMPLE PURPOSES ONLY

# All Advisors Who Treat RAI-R mDTC Would Switch to a TRK Inhibitor in an *NTRK*+ Patient; the Slight Majority Would Make the Switch at Disease Progression

FOR EXAMPLE PURPOSES ONLY

# More Advisors Would Choose Larotrectinib Over Entrectinib in RAI-R mDTC; However, 39% of Advisors Were Unsure of Their Choice of TRK Inhibitor



FOR EXAMPLE PURPOSES ONLY





# Lung Cancer-Specific Questions

# Forty-Eight Percent of the Advisors Have Treated $\geq 21$ mNSCLC Patients in the Past Year; 45% of Advisors Have Treated an *NTRK* Fusion-Positive mNSCLC Patient



Approximately how many patients with metastatic NSCLC (mNSCLC) have you treated in the past 12 months? (N = 33)

Approximately how many *NTRK* fusion-positive mNSCLC patients have you ever treated? (N = 33)



0-10 11-20 21-30 31-40 41-50

0-10 11-20 21-30 31-40 41-50

# For the Majority of Advisors, Most or All of Their mNSCLC Patients Receive *NTRK* Fusion Testing

What percentage of your mNSCLC patients receive *NTRK* fusion testing? (N = 33)

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# For 55% of Advisors, *NTRK* Fusion Testing Is Automatically Requested

Is *NTRK* fusion testing automatically requested for mNSCLC patients or do you need to specifically request the testing? (N = 33)

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# Most Advisors Outsource *NTRK* Gene Fusion Testing in NSCLC; the Majority of These Advisors Use DNA-Based Testing



How does your practice test NSCLC patients for *NTRK* gene fusions? Select all that apply.  
(N = 33)





# Most Advisors Initially Use Tissue for Biomarker Testing and Reflex to Liquid Biopsy Where Appropriate

What testing algorithms do most of your patients with mNSCLC experience for biomarker testing? (N = 33)

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# Slightly More Advisors Initiate First-Line Therapy While Waiting for *NTRK* Fusion Results vs Waiting for *NTRK* Fusion Results Before Beginning Therapy

Do you test for *NTRK* prior to initiating first-line systemic therapy in mNSCLC?

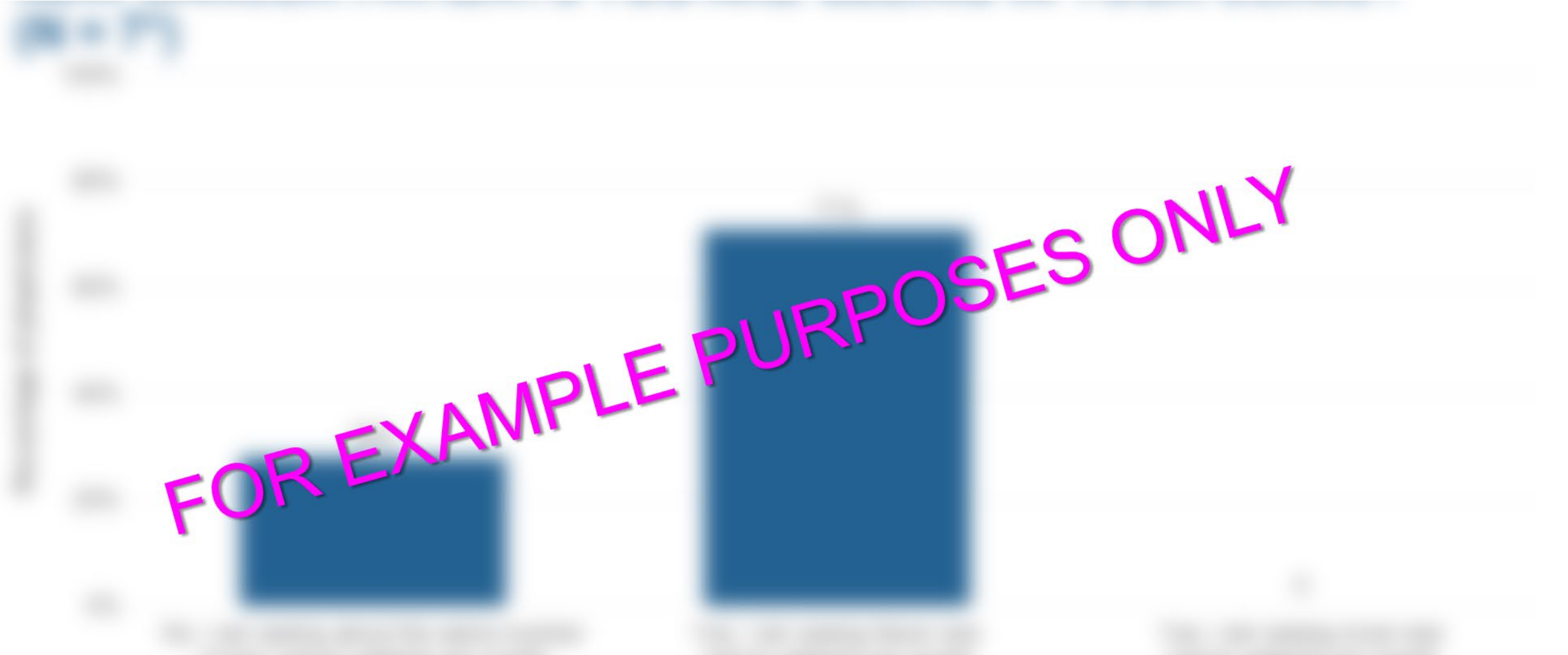
FOR EXAMPLE PURPOSES ONLY



# Most Advisors Would Use a TRK Inhibitor for This Patient; Slightly More Would Choose Larotrectinib

If an *NTRK* gene fusion is detected in a mNSCLC patient *prior* to initiating first-line systemic therapy, what therapy option would you prefer (assuming adenocarcinoma

FOR EXAMPLE PURPOSES ONLY



# Around Half of the Advisors (47%) Would Be Comfortable or Very Comfortable With Switching Therapy to a TRK Inhibitor

When an *NTRK* fusion is detected *after* first-line systemic therapy was initiated for mNSCLC, how comfortable would you be in switching therapy to a TRK inhibitor, with 1 being Very uncomfortable and 5 being Very comfortable? (N = 32)



# All Advisors Would Switch to a TRK Inhibitor in an *NTRK*+ Patient; the Majority Would Make the Switch at Disease Progression

FOR EXAMPLE PURPOSES ONLY

# Most Advisors Were Not Familiar With the Comparative Effectiveness Data of Entrectinib vs Larotrectinib in NSCLC

On a scale of 1–5, how familiar are you with the comparative effectiveness data on entrectinib vs larotrectinib in NSCLC, with 1 being Unfamiliar and 5 being Very familiar?

(N = 32)

FOR EXAMPLE PURPOSES ONLY

# Slightly More Advisors Would Choose Larotrectinib Over Entrectinib in mNSCLC; Around One-Third of Advisors (31%) Were Unsure of Their Choice of TRK Inhibitor

FOR EXAMPLE PURPOSES ONLY





# Testing/Pathway-Specific Questions



# Most Advisors Do Not Have a Field for *NTRK* Biomarker Status in Their EHR

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# How Biomarker Testing Is Ordered



Please describe how you order biomarker testing at your practice. (N = 31)

<p>Ordered through EMR – “molecular testing” then I manually type in Tempus xT for tissue. I order Guardant or Tempus Blood through EMR under orders tab</p>	<p>Ordered through HER – panel testing.</p>
<p>Ordered through EMR</p>	<p>Ordered through EMR and then manually type in Tempus</p>
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# How Biomarker Testing Results Are Received by the Physician



Please describe how the results of biomarker testing are reported and transmitted back to the treating physician. (N = 30)

I am signed up for Tempus Portal and they are also scanned into EMR	I receive an email when the results are available. Also, my MA prints the results out and puts them on my desk
[Blurred text]	[Blurred text]
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# In Most Advisors' Practices, Patients Are Treated On-Pathway $\geq 81\%$ of the Time; 13% of the Advisors Do Not Use Clinical Pathways in Their Practice



FOR EXAMPLE PURPOSES ONLY

# Most Advisors' Practices Have Pathways for mNSCLC; for 40% of Advisors, Their Practice Has Pathways for *NTRK* Fusion-Positive Cancers



FOR EXAMPLE PURPOSES ONLY

# Practices Have Varied Approaches to Modifying Clinical Pathways; for 47% of the Advisors, Their Practice Modifies Pathways Every 4–6 Months

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\*Three advisors indicated they are unsure; 1 advisor specified every 3 months.



# For Practices That Use Clinical Pathways, Slightly More Have Pathways Integrated Into the EHR



Are your clinical pathways integrated into the EHR? (N = 30)

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# Pathways Are Typically From a Third-Party Entity, Most Often ClinicalPath or OneOncology

Are the clinical pathways used in your practice developed internally or do you rely on a third-party entity? (N = 30)

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# For Those Who Have Internally Created Pathways, the Department Head, a Disease-State Expert, and a Precision Medicine Expert Are Most Likely to Be Involved

If your clinical pathways are created internally, who is part of the pathway development?  
Select all that apply. (N = 30)

FOR EXAMPLE PURPOSES ONLY



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