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Acute Myeloid Leukemia: Impact of Recent Data Presentations on Clinical Practice in US and EU5

Complimentary Report

Acute Myeloid Leukemia: Impact of Recent Data Announcement on Clinical Practice in United States and Europe

Data & Analysis REPORT

Source: **MDoutlook OncoPoll® Survey**

Fielded: December 2015 – January 2016
- 153 Physician Responses -

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**

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Methodology

- The primary research phase involved a survey to hematologic and medical oncologists who treated Acute Myeloid Leukemia (AML) located in the US and EU
- All participants had a minimum of 5 AML patients currently under their care and treatment
- Fielded in December 2015 and January 2016, via approximately 25 minute internet-based survey
- 153 total responses from qualified physicians
  - From 5 European countries and 21 US states (not shown)

European Countries Participating (# responses)		
Germany (25)	Italy (24)	Spain (19)
France (18)	United Kingdom (16)	

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**
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Executive Summary

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Executive Summary

AML Patient Volume

- Respondents in this activity are active AML treaters: in the last 6 months, US physicians managed, on average, a minimum of 13 AML patients, while EU5 physicians managed a minimum of 20 patients
- Almost all AML treaters see both newly-diagnosed and relapsed / refractory disease, and patients of all ages

RATIFY Trial: Awareness, Sources of Information and Perceived Clinical Importance

- Physicians from US and FR report the highest awareness of RATIFY trial averaging 3.1 on a 0-5 scale, followed by SP (2.9)
  - DE (2.3), IT (2.2) and UK (2.4) physicians report the lowest awareness
- In all countries except FR, most common way of learning about the RATIFY study was by attending Presidential Symposium at ASH 2015 (range 35-55% of respondents)
  - Reading the published Abstract was most common approach of learning in FR (50%). Also commonly used by US, IT and SP physicians (24-26%)
  - 11-30% of physicians heard about RATIFY trial results from colleagues (3rd most common source of information overall)
- Physicians perceive the new information about midostaurin as being of high clinical importance, demonstrated by consistent ratings in all countries between 4.4 and 4.7 on a scale of 1-5 for younger patients
  - Even for patients 60 and over, physicians rate this data between 3.8 and 4.4, even though these patients were not included in the RATIFY trial

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**
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Executive Summary

Sorafenib in AML: Awareness, Sources of Information and Perceived Clinical Importance

- Average level of awareness about sorafenib oral presentation on activity in FLT3+ AML
  - Average ratings range from 2.9 (FR) to 1.7 (DE)
- The most common methods of learning about these results were: reading the abstract, attending the presentation and from a colleague (these 3 methods total at least 70% of awareness in each country)
- Physicians perceive the new information about sorafenib in relapsed / refractory AML as important, with average ratings of 3.8-4.2 for younger patients and 3.7-4.0 for older ones

Expected Integration of Midostaurin and Sorafenib into Current Treatment Protocols for AML

- Midostaurin would be the dominant FLT3 inhibitor integrated into induction therapies for FLT3+ AML
  - Most physicians will also integrate midostaurin as post-transplant maintenance therapy for FLT3+ AML
- Sorafenib is also expected to be widely integrated into induction protocols for FLT3+ AML, albeit much less than that seen with midostaurin
  - Much lower percentage of physicians would use sorafenib in their post-stem cell transplant maintenance treatments, with less than half of physicians intending to use it

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**
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Executive Summary

FLT3 inhibitor Gilteritinib: Awareness, Sources of Information and Perceived Clinical Importance

- Low level of awareness about gilteritinib for an oral presentation, with ratings from 0.8 (DE) to 2.1 (SP)
- Those who were aware of this presentation learned about it primarily from reading the abstract (range from 25-68% of those aware were from this method
- Even with low initial awareness, physicians still assign a relatively high level of clinical importance to the information, with average ratings of 3.3-4.0 for AML patients of all ages

Poster Presentations for FLT3 Targeted Therapies: AGS62P1, FF-10101, and Quizartinib

- Very low level of awareness about AGS62P1 and FF-10101 (range 0.9-1.8); slightly higher level of awareness about quizartinib (1.6-2.5)
- All three of these new agents are seen as having some importance to the FLT3+ AML field, with average ratings ranging from 2.9 to 3.6

Non-FLT3 Targeted Agents in AML: Awareness and Perceived Clinical Importance of AG-221, SGN-CD33a, and Venetoclax

- Varying levels of awareness for these agents, ranging from 1.1 to 2.8
  - Most awareness about bcl-2 inhibitor venetoclax; might be due to more advanced development status in other areas
- All three of these new agents are seen as having some importance to AML, with average ratings ranging from 2.8 to 4.0

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Respondent Demographics and AML Patient Flow

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**

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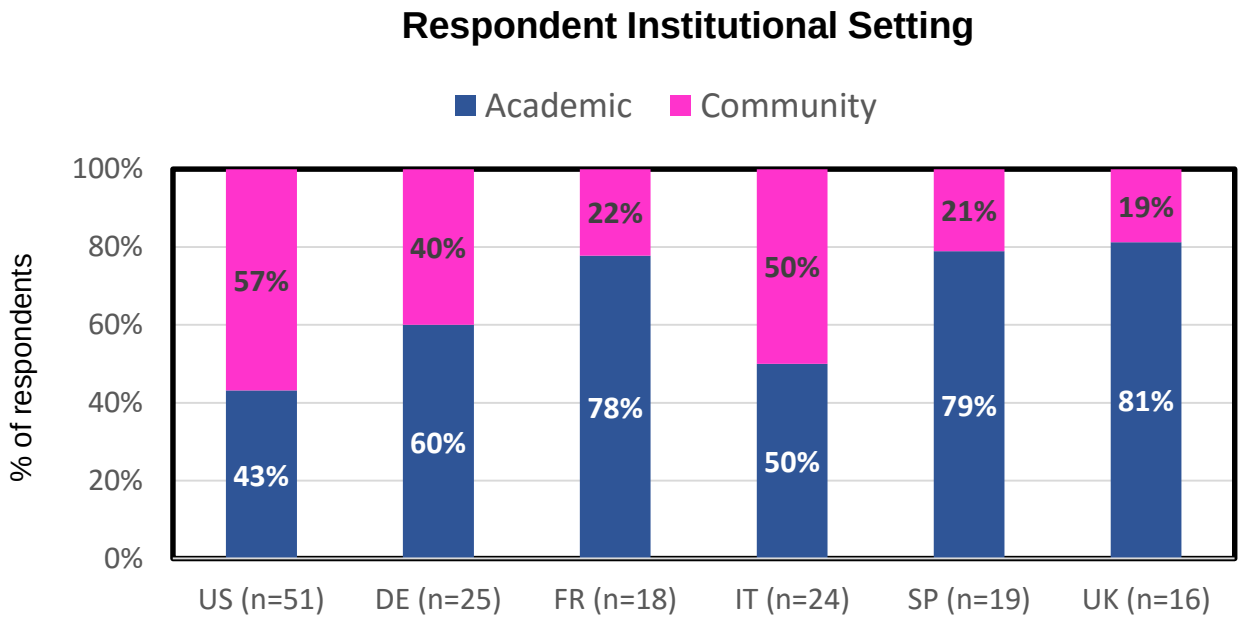
Respondent Institutional Setting



Key Conclusions

- In US, respondents had ~60/40 community vs. academic split
- In EU5, more survey participants were located in an academic center
  - Exception is Italy, where same number of participants were academic and community

Question: How would you best describe your practice setting?

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Midostaurin in Newly Diagnosed AML patients: Awareness and Impact of Data from RATIFY Trial Presented at ASH (Abstract #6)

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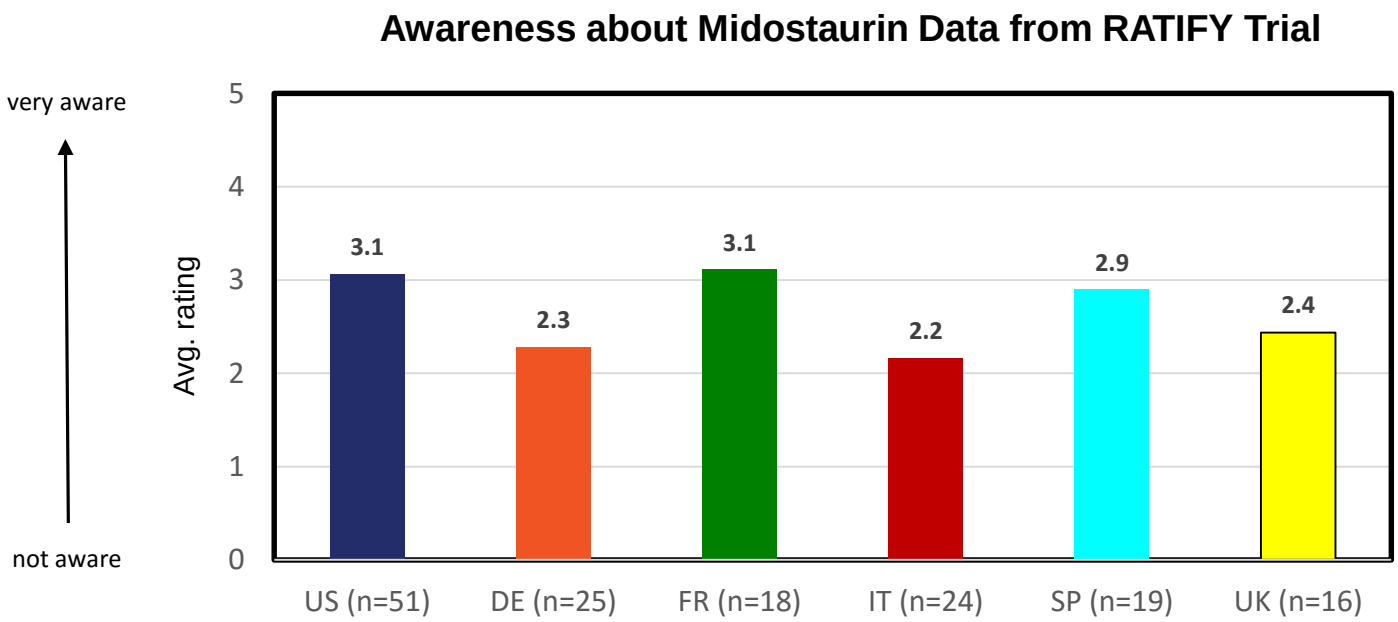
Average Level of Awareness about Ratify Trial Results for Newly Diagnosed AML Patients 60 and Younger



Key Conclusion

- Overall, there is an average level of awareness about the RATIFY trial describing the use of midostaurin in newly diagnosed, younger AML patients
  - Level of awareness can be split into two groups: higher level (US, France, and Spain) and lower level (Germany, Italy, and United Kingdom)

Question: Before this activity, how aware were you about this new information contained in this abstract?

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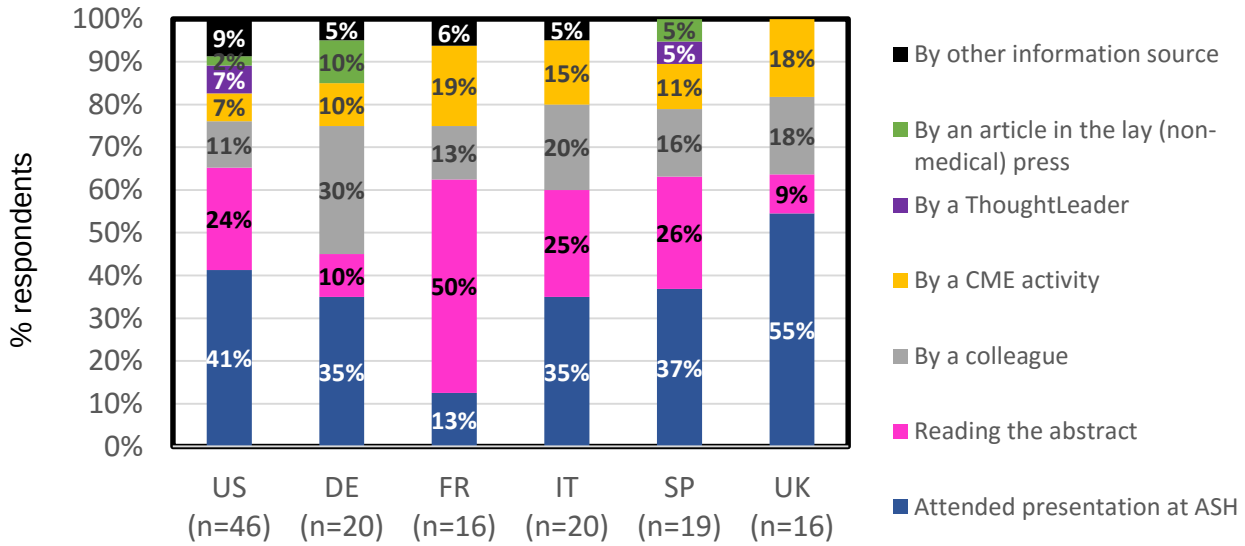
Attendance at the Presentation of the RATIFY Results was High Among Survey Participants

Learning Method for Midostaurin Data in Newly Diagnosed AML



Key Conclusions

- Overall, most of the learning about this presentation was through 1 of 3 ways: reading the abstract, from a colleague or attending the presentation
- This abstract is being included in CME activities, as evidenced by the proportion learning about it from this source

Question: How did you learn about this abstract? [Only answered by those with at least a minimal level of awareness about the presentation.]

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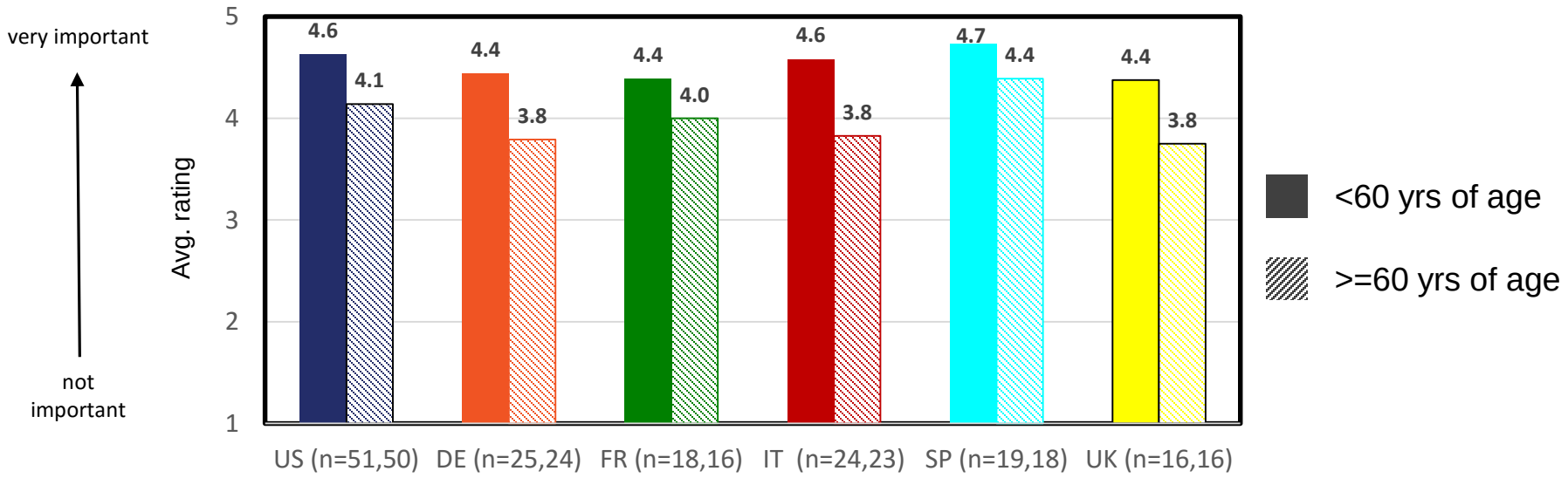
Midostaurin Seen as a Very Important Advance for Newly Diagnosed AML in US and EU5

Clinical Importance of Midostaurin to Newly Diagnosed AML



Key Conclusions

- Overall, physicians have a very high opinion of midostaurin as an effective treatment for newly diagnosed FLT3+ AML
- In all countries, midostaurin is seen as slightly less important for the older patients
  - Likely due to the use of stem cell transplant in the RATIFY trial

Question: Taking all of these factors into consideration and relative to your current treatment of AML, how clinically important do you find the information in this abstract concerning the addition of midostaurin throughout the initial treatment of newly diagnosed AML patients?

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**
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Sorafenib: Awareness and Impact of New AML Data Presented at ASH (Abstract #319)

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**

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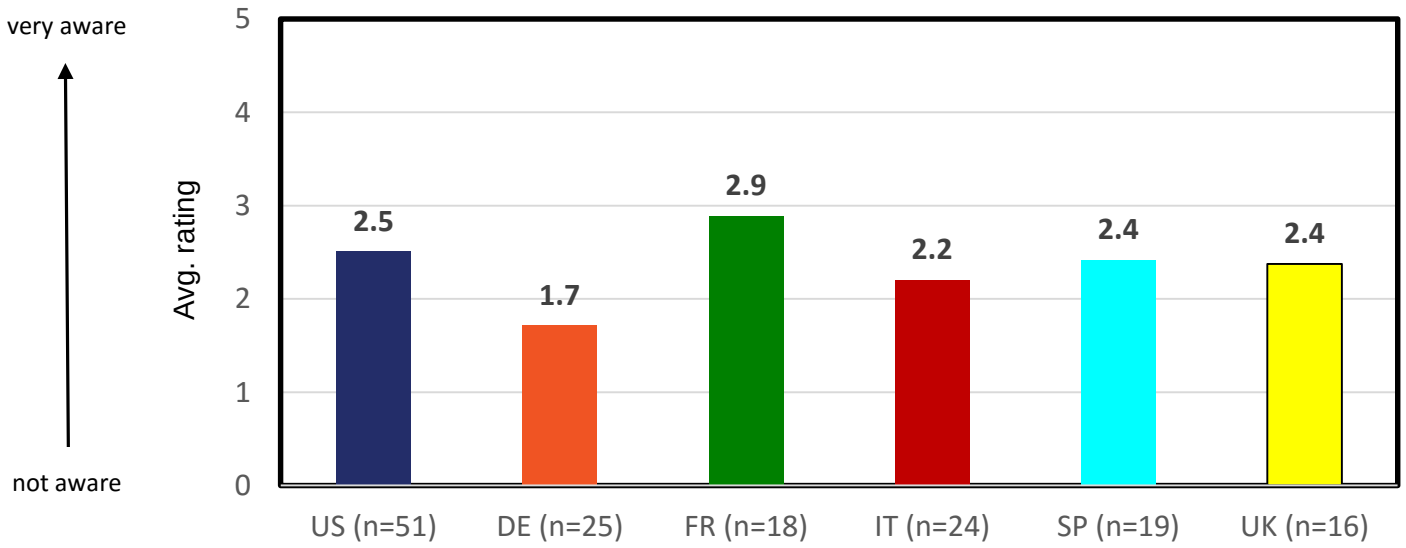
Average Level of Awareness about Sorafenib in Relapsed/Refractory (R/R) AML

Awareness about Sorafenib Oral Presentation in AML at ASH



Key Conclusion

- Overall, an average level of awareness about the sorafenib in R/R AML presentation at ASH exists throughout the US and EU5
  - Level of awareness is lower in Germany than in the other countries

Question: Before this activity, how aware were you about this new information concerning sorafenib?

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**
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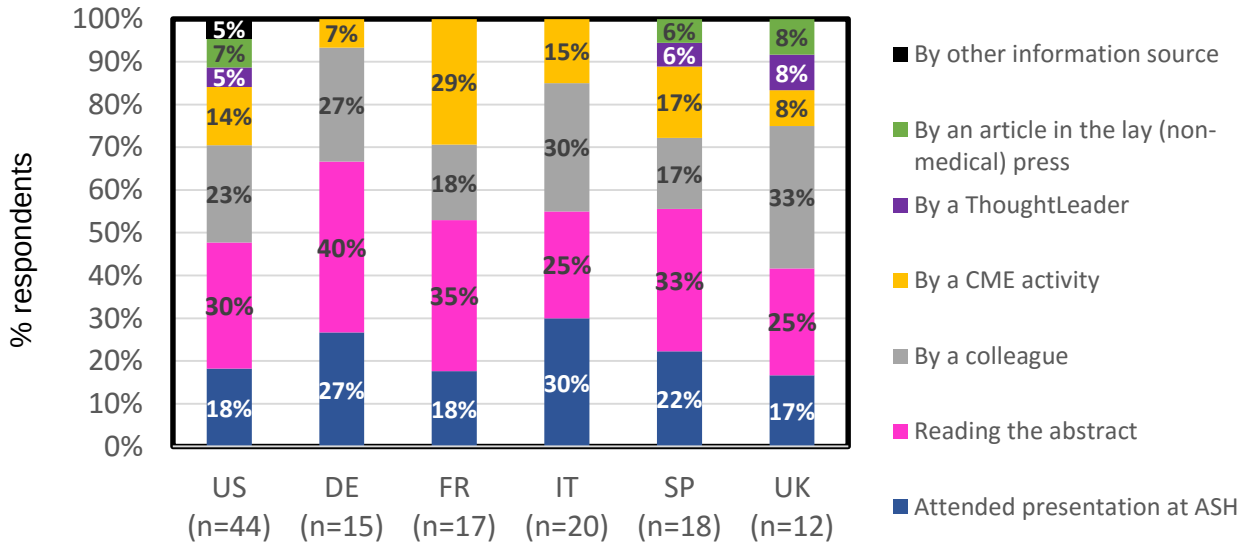
Learning about Sorafenib in AML Presentation Has Been Primarily Through Reading the ASH Abstract

Learning Method for Sorafenib in R/R AML Oral Presentation at ASH



Key Conclusions

- Overall, most of the learning about this presentation was through 1 of 3 ways: reading the abstract, from a colleague, or attending the presentation
- This abstract is being included in CME activities
- Some ThoughtLeader discussion of this presentation in the US, Spain and UK

Question: How did you learn about this abstract? [Only answered by those with at least a minimal level of awareness about the presentation.]

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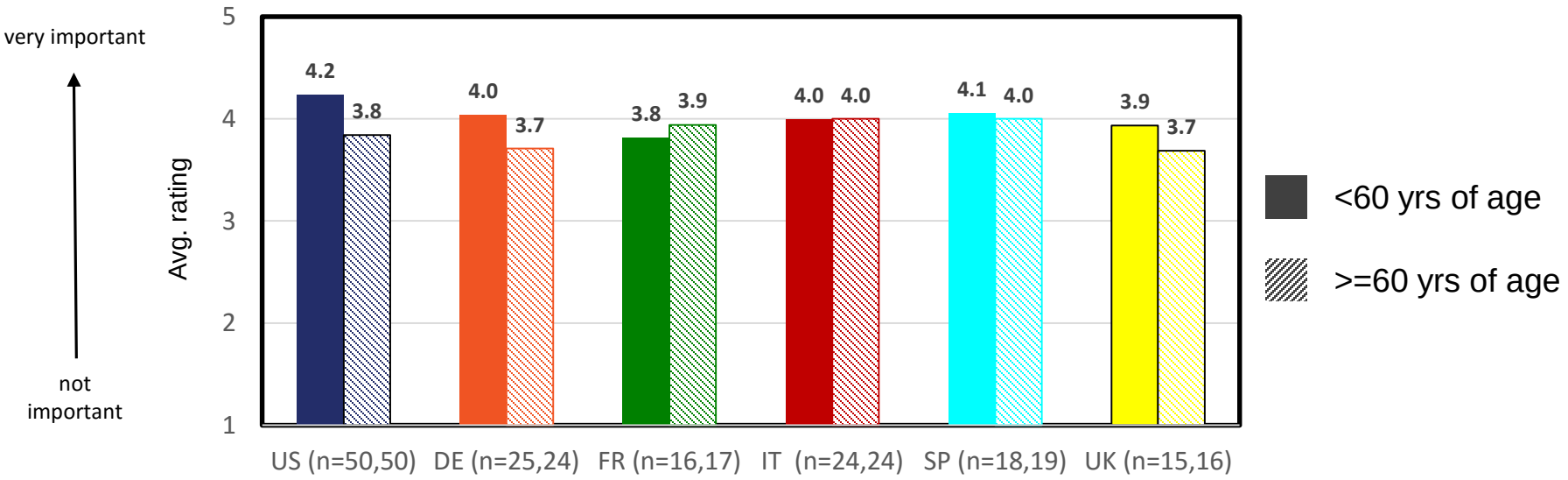
Sorafenib Seen as an Important Advance for Relapsed/Refractory AML

Clinical Importance of Sorafenib to R/R AML



Key Conclusions

- Overall, physicians believe sorafenib will be important to their clinical practice for R/R AML
  - No real difference in impressions seen among these 6 countries
- Importance slightly favors the younger patients in most countries, but will still be key for older patients

Question: Relative to your current treatment of AML, how clinically important do you find the information in this abstract concerning the use of sorafenib as a treatment of relapsed / refractory AML patients? Please rate from 1= Not at all important to 5 = Extremely important.

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**

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Expected Integration of Midostaurin and Sorafenib into Current Treatment Protocols for AML

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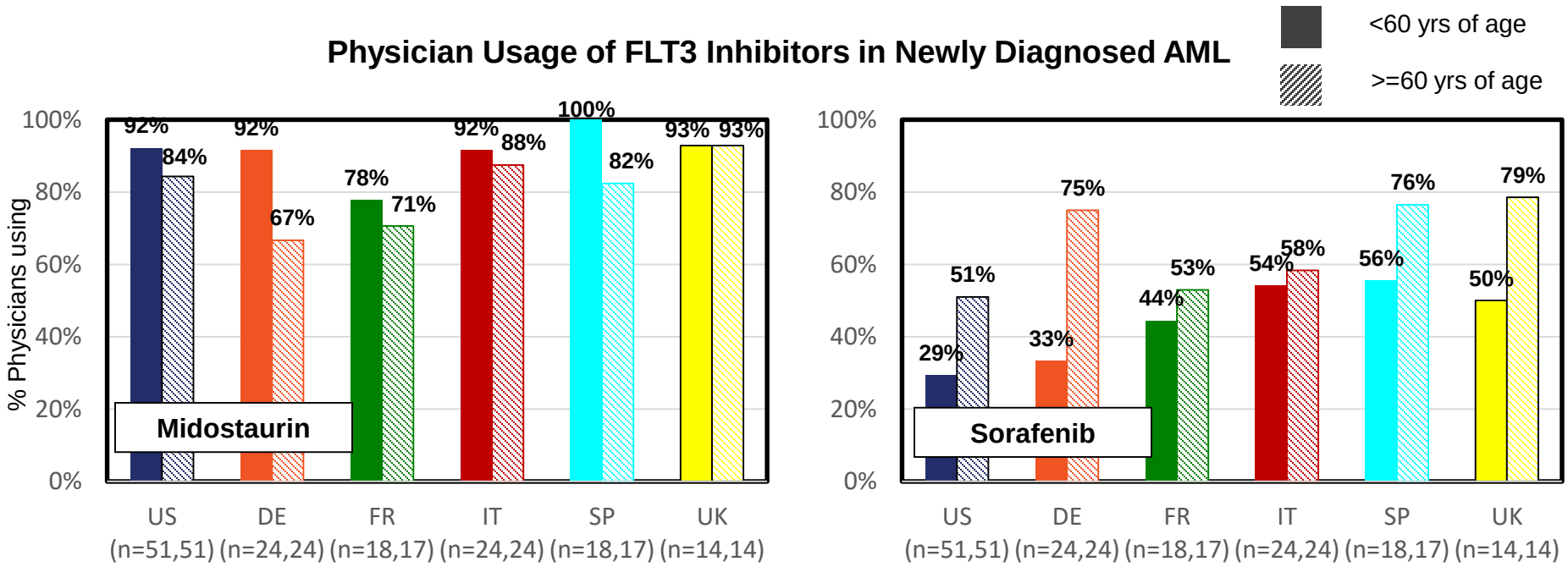
Near Universal Usage of Midostaurin by Physicians Treating Newly Diagnosed AML; Fewer Will Be Using Sorafenib and More Sorafenib in Older Patients

Physician Usage of FLT3 Inhibitors in Newly Diagnosed AML



Key Conclusions

- Over 90% of physicians will integrate midostaurin into their treatment approaches for newly diagnosed AML in patients under 60 years of age
  - 67-93% of physicians will also use midostaurin in some manner with their older AML patients
- A smaller percentage of physicians will use sorafenib, both for younger and older populations

Question: Based on all information currently available and assuming midostaurin receives regulatory approval for AML and is commercially available to you, how will you integrate it into your treatment of newly diagnosed FLT3+ AML?

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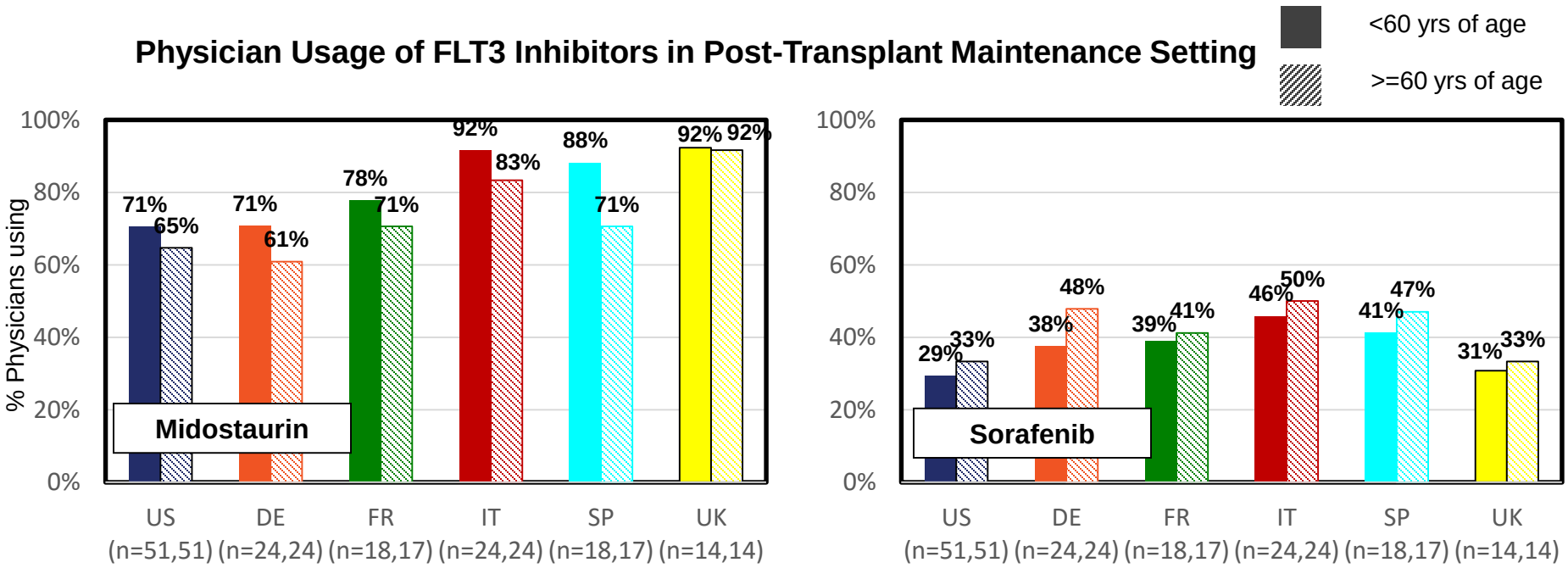
Most Physicians Will Use Midostaurin in Some Format in the Post-Transplant Maintenance Setting for AML; Up to Half Will Also Use Some Sorafenib

Physician Usage of FLT3 Inhibitors in Post-Transplant Maintenance Setting



Key Conclusions

- Up to 92% of physicians will integrate midostaurin into their maintenance treatment approaches for AML patients under 60 years of age
  - More will use midostaurin with their younger AML patients than with the older ones in this setting
- A smaller percentage of physicians will use sorafenib, both for younger and older populations

Question: Based on all information currently available and assuming midostaurin receives regulatory approval for AML and is commercially available to you, how will you use it in the post-transplant maintenance setting for FLT3+ AML?

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Gilteritinib (ASP2215): Awareness and Impact of New AML Data Presented at ASH (Abstract #321)

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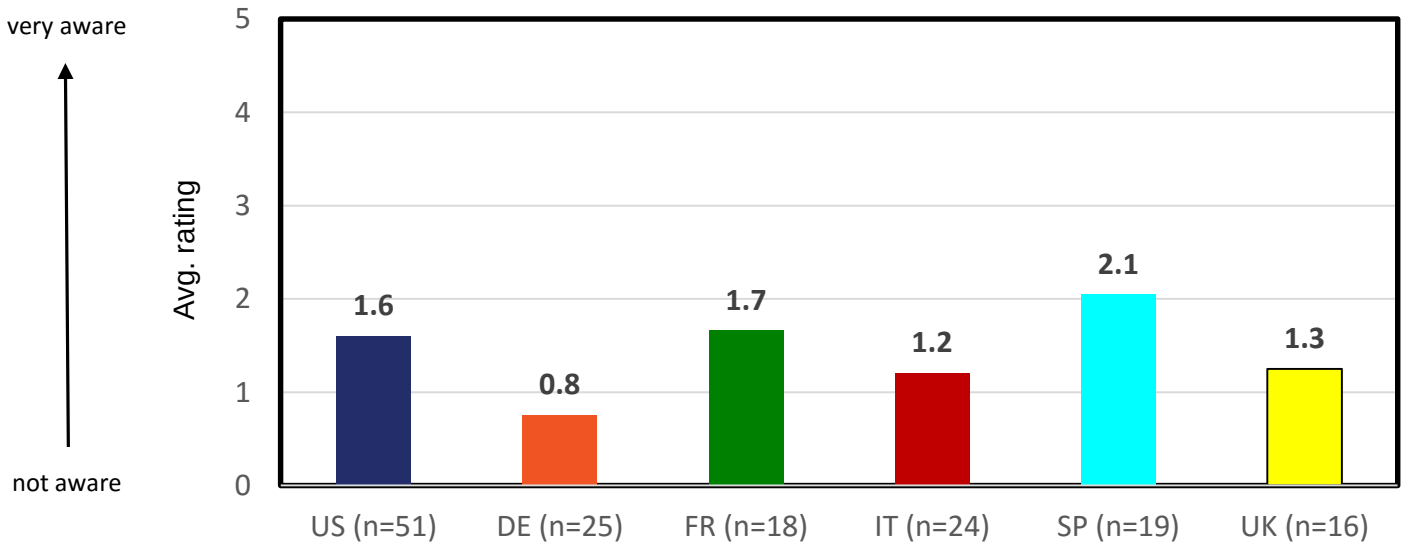
Low Level of Awareness about Gilteritinib

Awareness about Gilteritinib Oral Presentation at ASH



Key Conclusion

- Overall, a very low level of awareness for the phase 1/2 data for gilteritinib as presented at ASH

Question: Before this activity, how aware were you about this new information concerning gilteritinib?

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**
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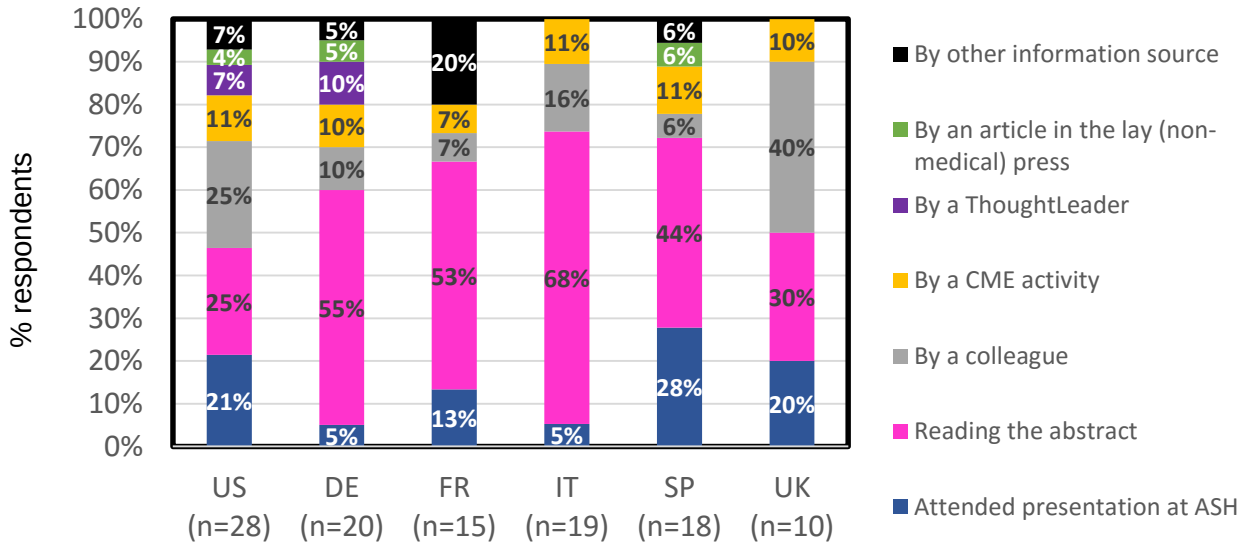
Learning about Gilteritinib Presentation Has Been Primarily Through Reading the ASH Abstract

Learning Method for Gilteritinib Oral Presentation at ASH



Key Conclusions

- Overall, most of the learning about this presentation was through 1 of 3 ways: reading the abstract, from a colleague or attending the presentation
- CME activities do appear to include the abstract in their presentations
- Some ThoughtLeader discussion of this presentation in the US and Germany is apparent

Question: How did you learn about this abstract? [Only answered by those with at least a minimal level of awareness about the presentation.]

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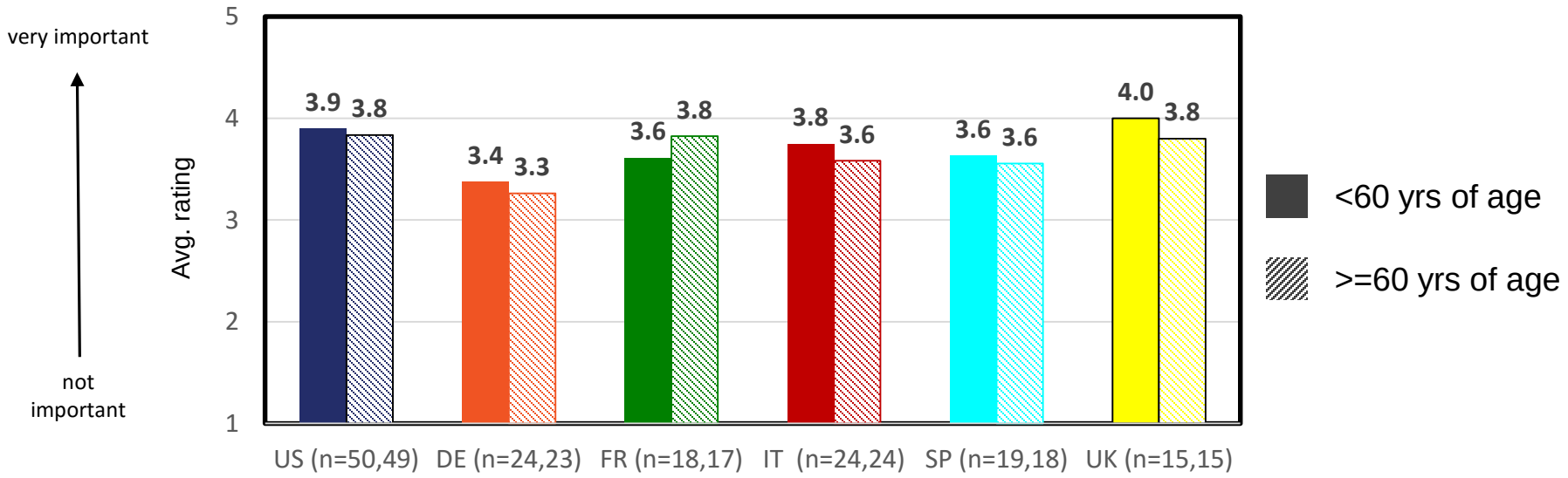
Gilteritinib Seen as Important Advance for Relapsed/Refractory AML

Clinical Importance of Gilteritinib to R/R AML



Key Conclusions

- Overall, physicians have a positive view of the gilteritinib data that was presented at ASH
  - German physicians are the least impressed, being the only group rating below the 3.6-4.0 range
- No important distinctions are seen for R/R AML patients in different age groups

Question: Relative to your current treatment of AML, how clinically important do you find the information in this abstract concerning the use of gilteritinib as a treatment of relapsed / refractory AML patients? Please rate from 1= Not at all important to 5 = Extremely important.

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**
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FLT3 Targeted Therapies: Impact of New Data Announcements for Agents Presented as Posters

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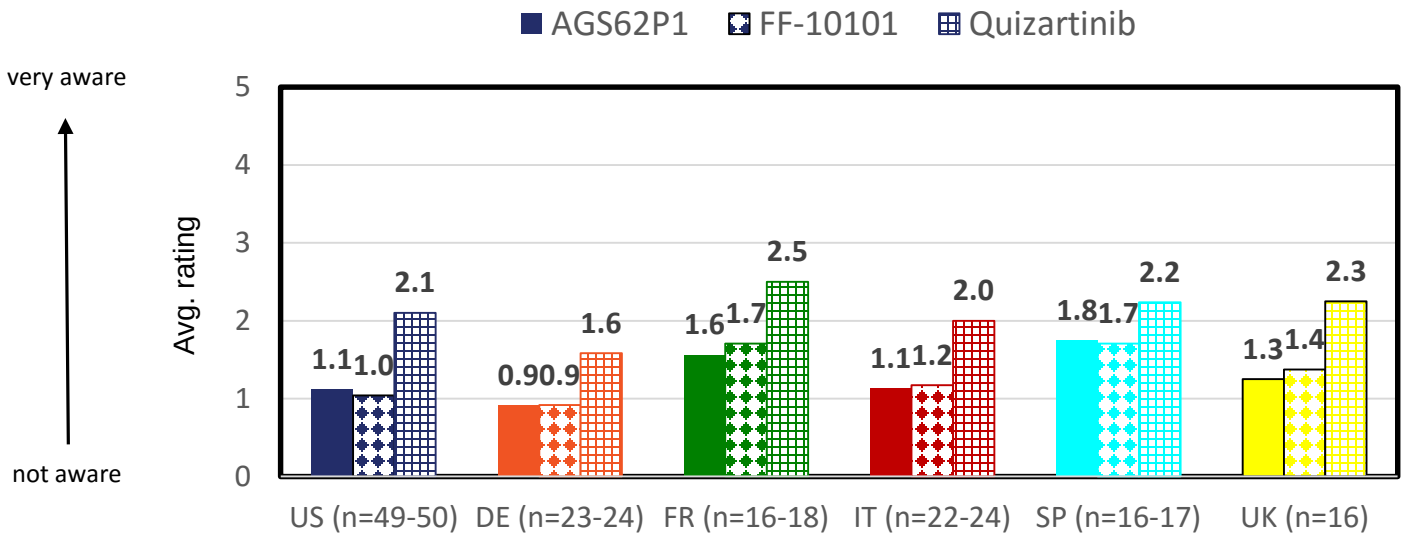
Low Level of Awareness about AGS62P1, FF-10101, and Quizartinib Poster Presentations in AML

Awareness of Selected ASH Poster Presentations Targeting FLT3



Key Conclusions

- Awareness of these poster presentations are lower than that seen for the oral presentation
- Overall, much higher level of awareness of quizartinib than the other 2 new agents
  - Awareness of new quizartinib data is still relatively low

Question: Before this activity, how aware were you about this new information contained in these abstracts? Please rate each one independently.

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**
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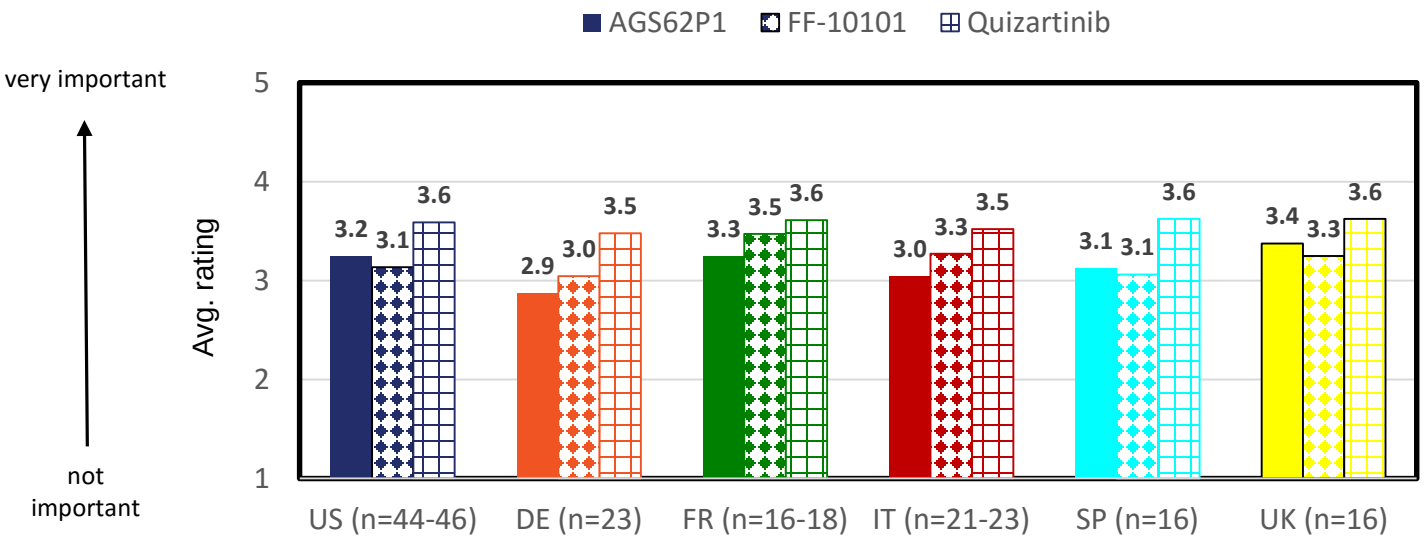
Importance of AGS62P1, FF-10101, and Quizartinib Poster Presentations in AML: Even Very New Agents are Seen as Important to Clinical Practice

Clinical Importance of FLT3-Targeted Agents Presented as Posters



Key Conclusions

- All three of these new flt3-targeted agents in development are seen as important in the AML field
- Of these 3, quizartinib is generally rated the highest, as expected given its more advanced position in its development

Question: Relative to your current treatment of AML, how clinically important do you find the information in these abstracts? Please rate from 1= Not at all important to 5 = Extremely important. Please select NA if you are unaware of any of these agents.

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**
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Non-FLT3 Targeted Therapies in AML: Impact of New Data Announcements

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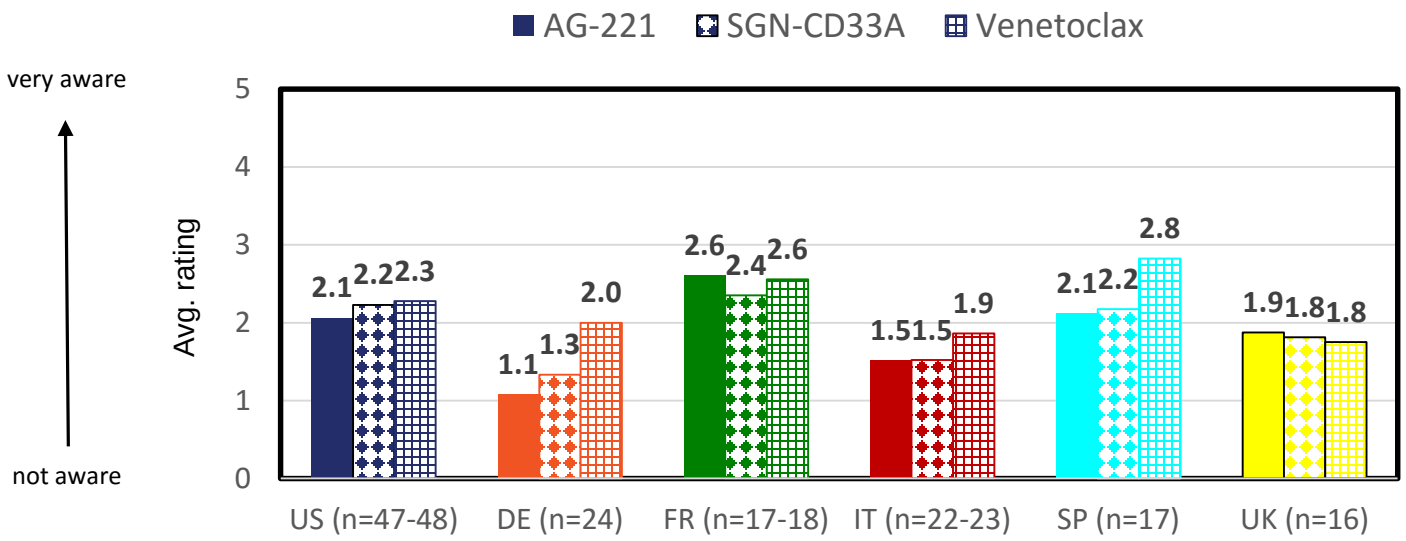
Low Level of Awareness about ASH Presentations for AG-221, SGN-CD33A, and Venetoclax in AML

Awareness of Selected ASH Presentations in AML



Key Conclusions

- As expected for drugs in early stages of development, only a small amount of awareness for these agents exists among the physician community
- Most awareness is seen for the bcl-2 inhibitor venetoclax
  - Awareness likely due to its advanced development in other hematologic malignancies (esp. CLL)

Question: Before this activity, how aware were you about this new information contained in these abstracts? Please rate each one independently.

Source: MDoutlook: **AML Impact of Recent Data Announcements Study in US and Europe**

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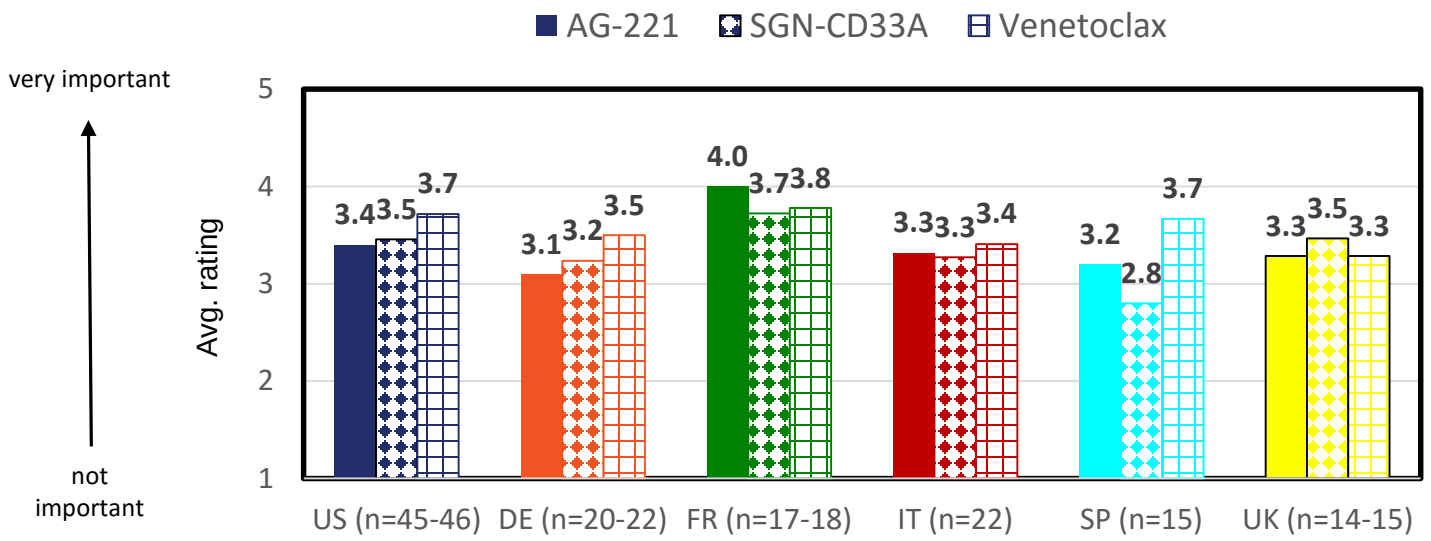
AG-221, SGN-CD33A, and Venetoclax Are All Expected to be Important in the Future Treatment Protocols for AML

Clinical Importance of Selected ASH Presentations in AML



Key Conclusions

- All three of these agents are expected to have a some clinical role in the treatment of AML at some point in the future
- In general, French physicians are most optimistic for these new drugs, while German respondents are the least optimistic

Question: Relative to your current treatment of AML, how clinically important do you find the information in these abstracts? Please rate from 1= Not at all important to 5 = Extremely important. Please select NA if you are unaware of any of these agents.

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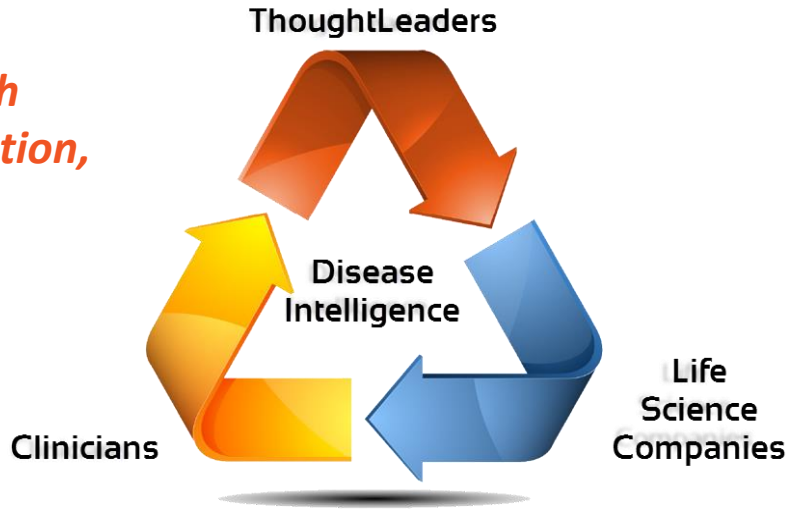
Solutions

- ***Oncology Intelligence and Market Research***
- ***ThoughtLeader / Peer Influencer Identification, Profiling and Relationship Building***
- ***Recruitment, Engagement, Participation***
- ***Strategy Development & Implementation***



MDoutlook Delivers Comprehensive Cancer Insight

Who

- Identifying and targeting the disease-specific ThoughtLeaders and cancer treaters that have the greatest impact on your success

What

- Understanding disease patterns and patient flows; which treatment decisions are made and why; attitudes towards current & pipe-line products

When

- Insight into which specific decisions are made - by stage, line, drug, duration – and the rationale

Where

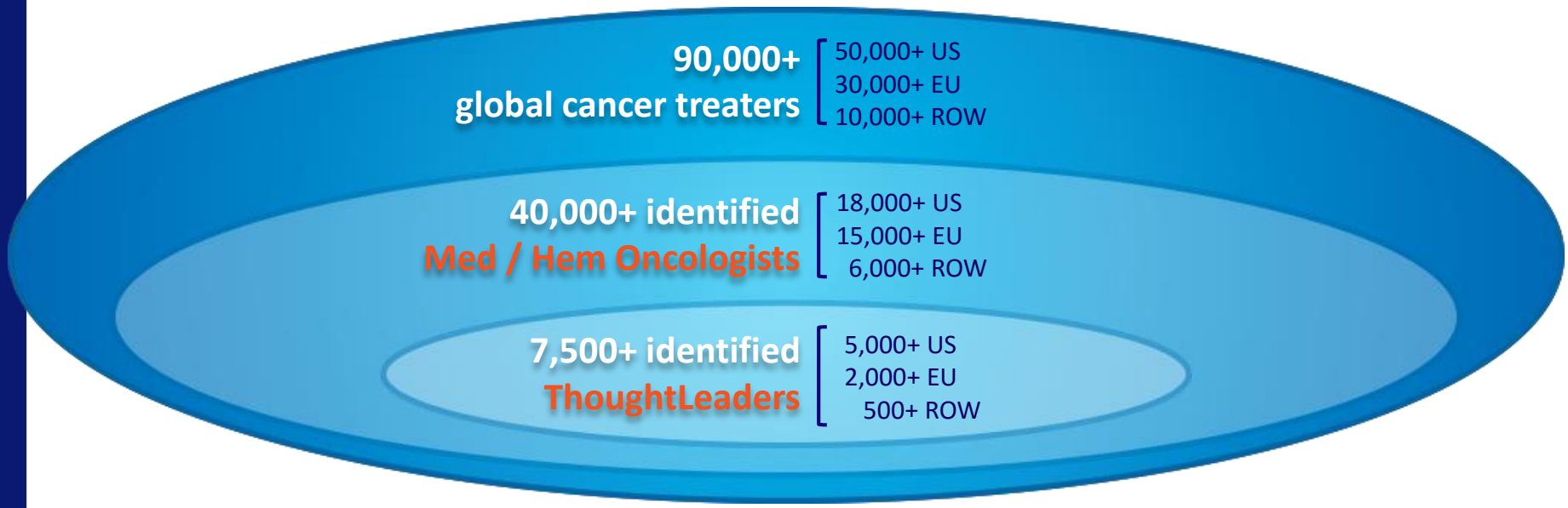
- Identifying and profiling the cancer centers of excellence and key community practices; referral patterns and other influences on patient flow and practice setting

Why

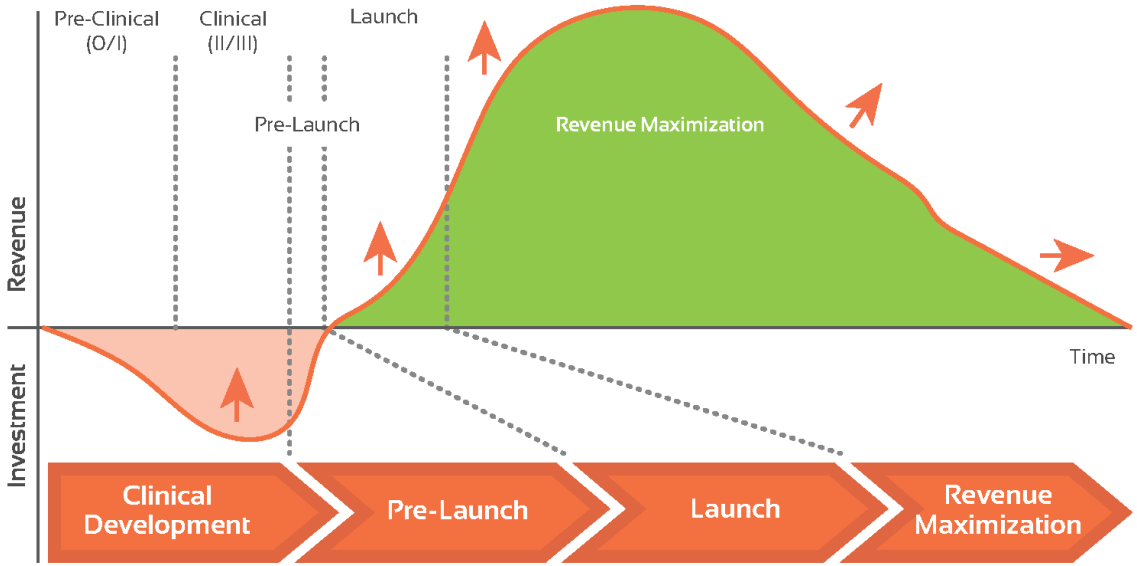
- The rationale behind specific treatment decisions, why are attitudes formed, what are the drivers and barriers to adoption

MDoutlook = ACTIONABLE DISEASE INSIGHT

Powered by Access to Network of Global Cancer Treaters



Delivering Intelligence Throughout Product Life Cycle



MDoutlook Oncology Intelligence Offerings

- **Disease Landscape**
- **Market Sizing & Forecasting**
- **Competitive Intelligence & Benchmarking**
- **ThoughtLeaders –** "National Level" identification, profiling & engagement

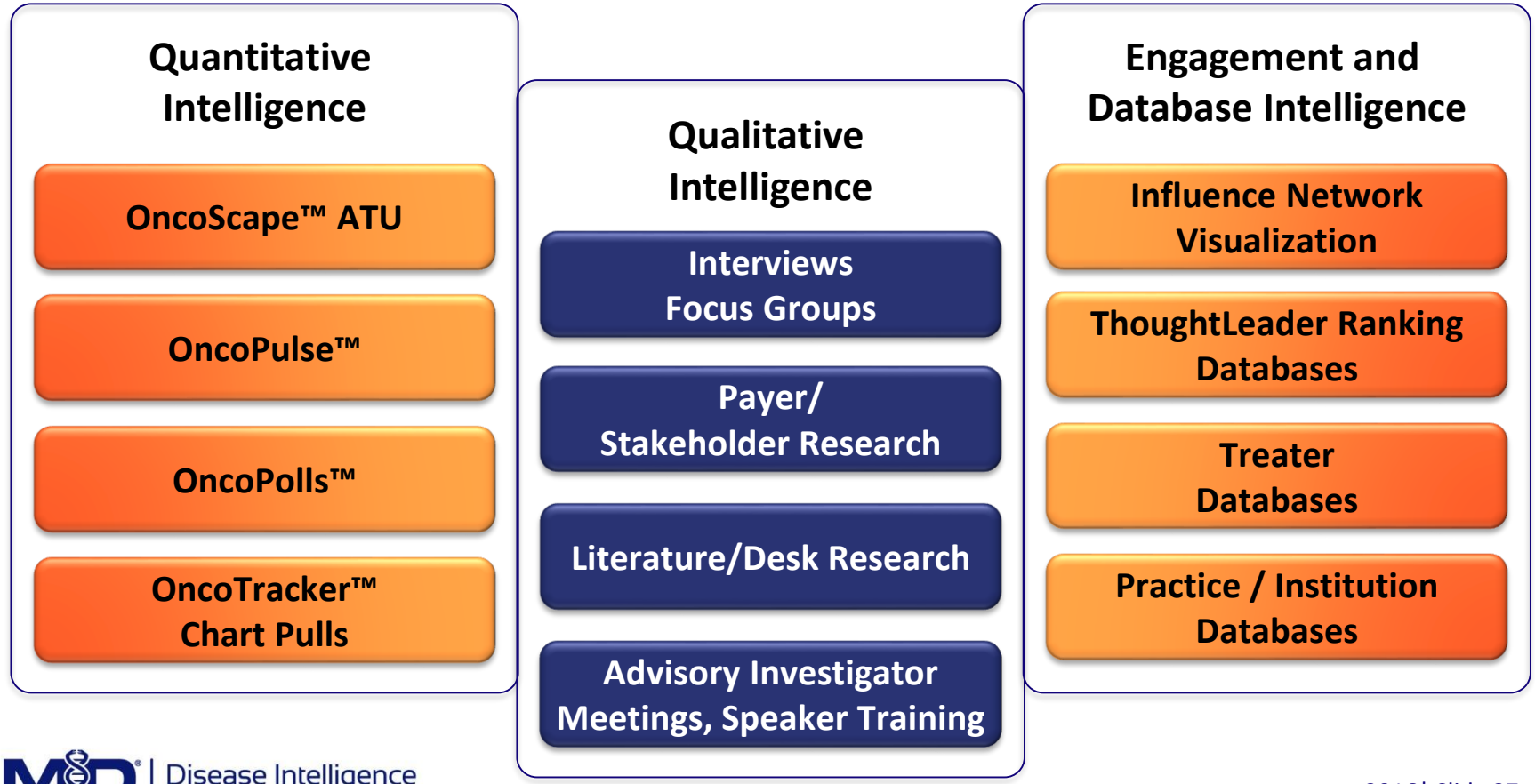
- **ATU & Competitive Intelligence**
  - Current utilization & market share
  - Drivers / barriers current products
  - Impact of New Data Announcements
- **Message Testing & Product Positioning**
- **ThoughtLeaders –** "Regional/Local Level" identification, profiling & engagement

- **KPI – i**nitiate tracking
- **Quantify Impact of Launch Strategies**
- **Qualify Drivers/ Barriers of New Usage**
- **Competitive Intel**
- **ThoughtLeader –** engagement
- **Treaters** – Targeting, prioritization, KAM
- **Message Re-Testing & Product Positioning Adjustments**
- **Eblasts**

- **KPI** – Ongoing tracking
- **ATU** – Re-quantification
- **Market Expansion –** Unmet clinical needs. Growth opportunities. New indication adoption scenarios
- **Competitive Intelligence**
- **Treaters** – Expansion of physician targets & key accounts
- **Eblasts**

Building Multi-Channel Intelligence Assets Since 2008

- Multi-disciplinary response targeting, using wide range of criteria
- All physician screening and validation is performed within the system
- US, Europe, Global experience



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For more information or to schedule a capabilities discussion, please feel free to contact us.