

# Physicians' Awareness and Understanding of Personalized Medicine in the Treatment of Cancer and Its Adoption in Clinical Practice: A Multinational Survey

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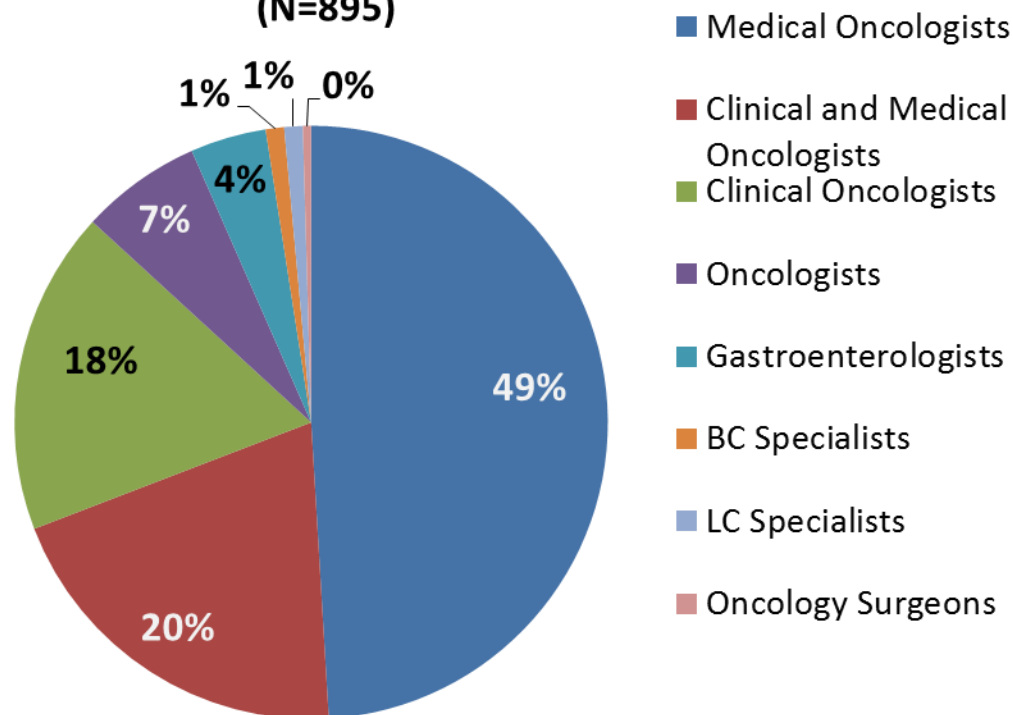
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## Objective and Methodology

- Objective: To assess the awareness and use of biomarkers in clinical practice by oncologists
- Methodology: 10-minute online interviews were conducted with 895 physicians from 12 countries between 28 Oct and 6 Dec 2013
  - Physicians were recruited by Ipsos Healthcare
  - Screening criteria:
    - Practicing oncology specialists
      - 50% mCRC, 25% stage IV BC, and 25% stage IIIb/IV NSCLC (by highest patient caseload)
    - 3 to 35 years of experience
    - Treat >15 patients per month

## 50 to 90 Oncologists From 12 Representative Countries in Europe, South America, and Asia Were Surveyed

**Physicians by Specialty<sup>a</sup>**  
(N=895)



- Certain evident regional differences were noted throughout the survey

| Country        | No. of Physicians |
|----------------|-------------------|
| Argentina      | 56                |
| Brazil         | 67                |
| China          | 78                |
| France         | 81                |
| Germany        | 84                |
| Italy          | 88                |
| Japan          | 50                |
| Russia         | 90                |
| Saudi Arabia   | 61                |
| Spain          | 87                |
| Turkey         | 60                |
| United Kingdom | 87                |

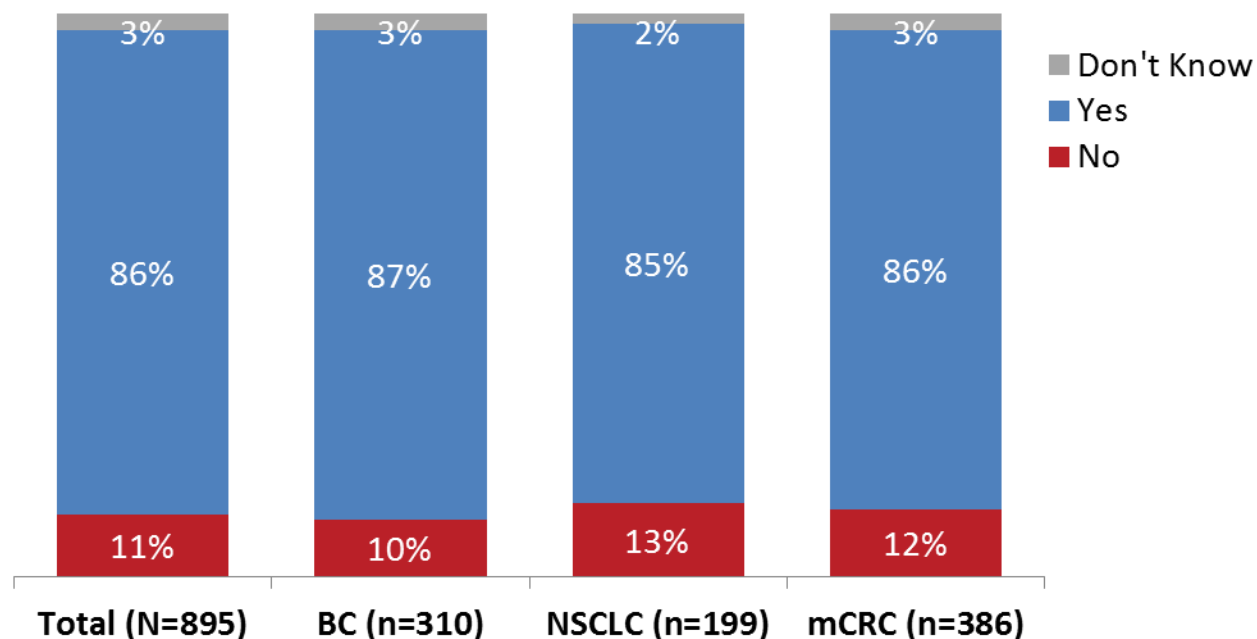
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26-30 September 2014, Madrid, Spain

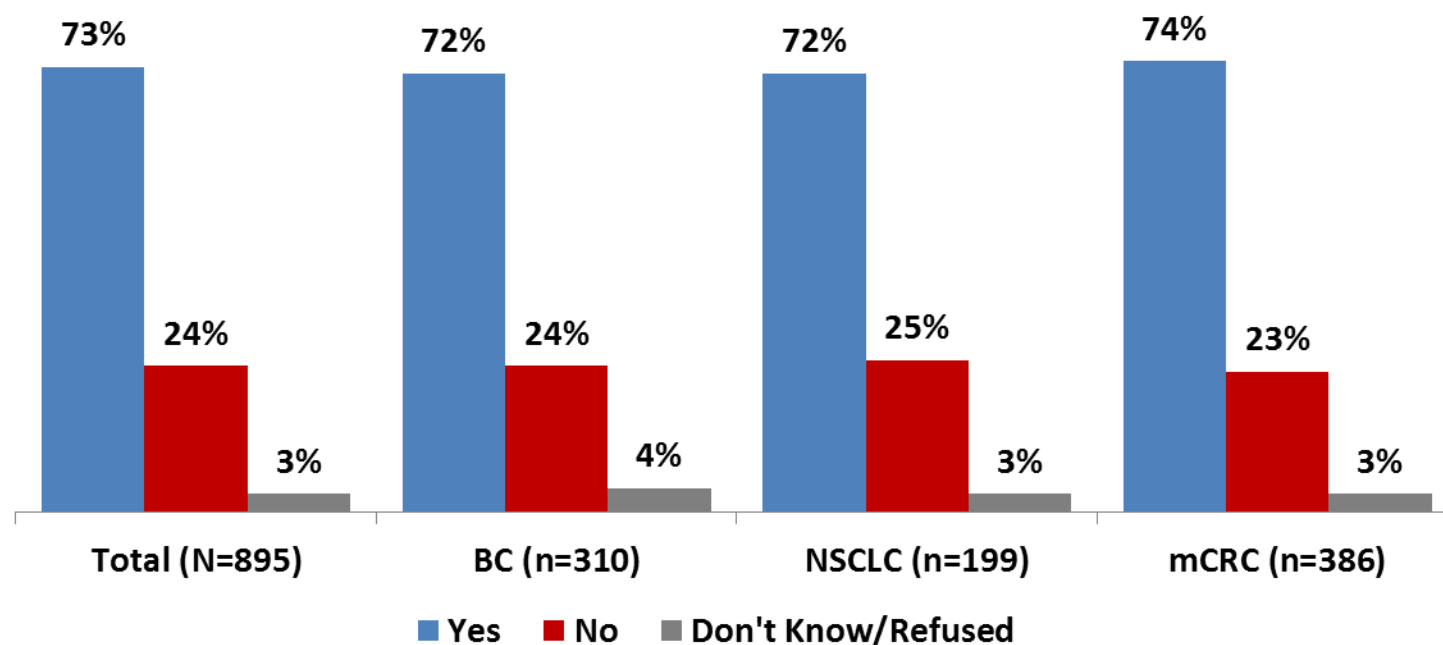
<sup>a</sup>Primary medical specialty was self-reported by physicians.

LC, lung cancer.

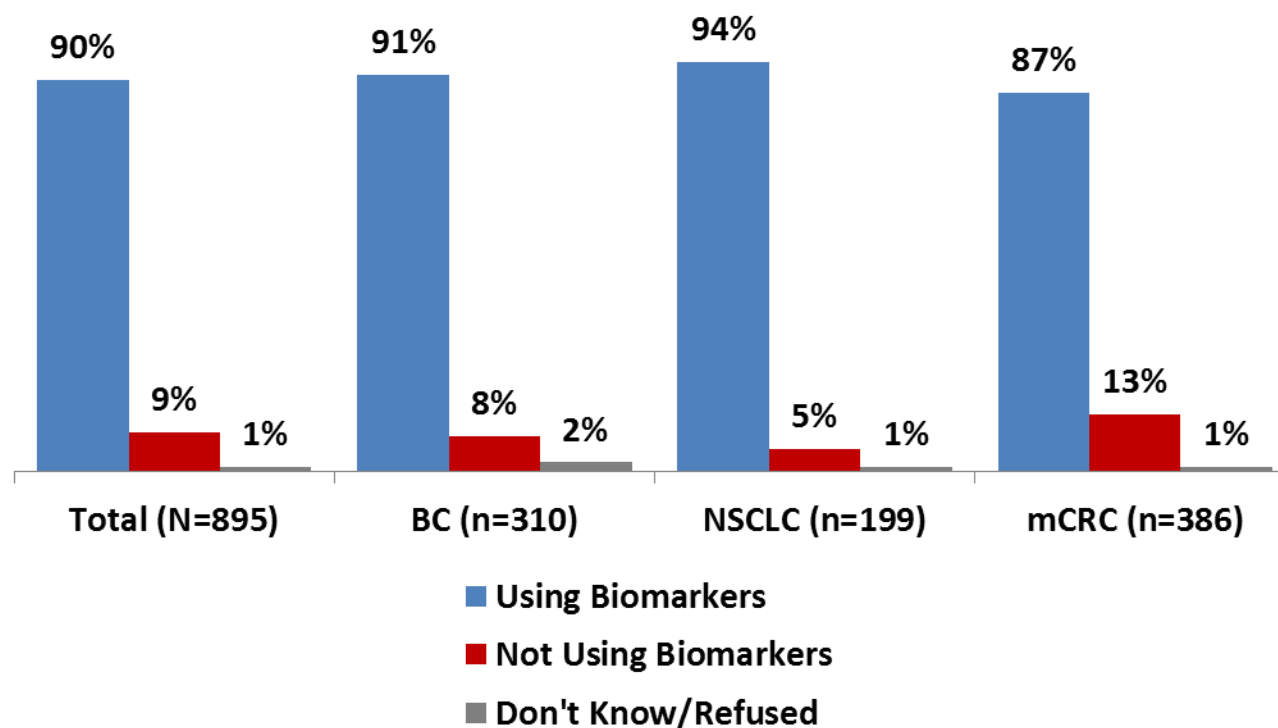
## The Majority of Patients Understand That Some Drugs Work Better in Some Patients Than in Others



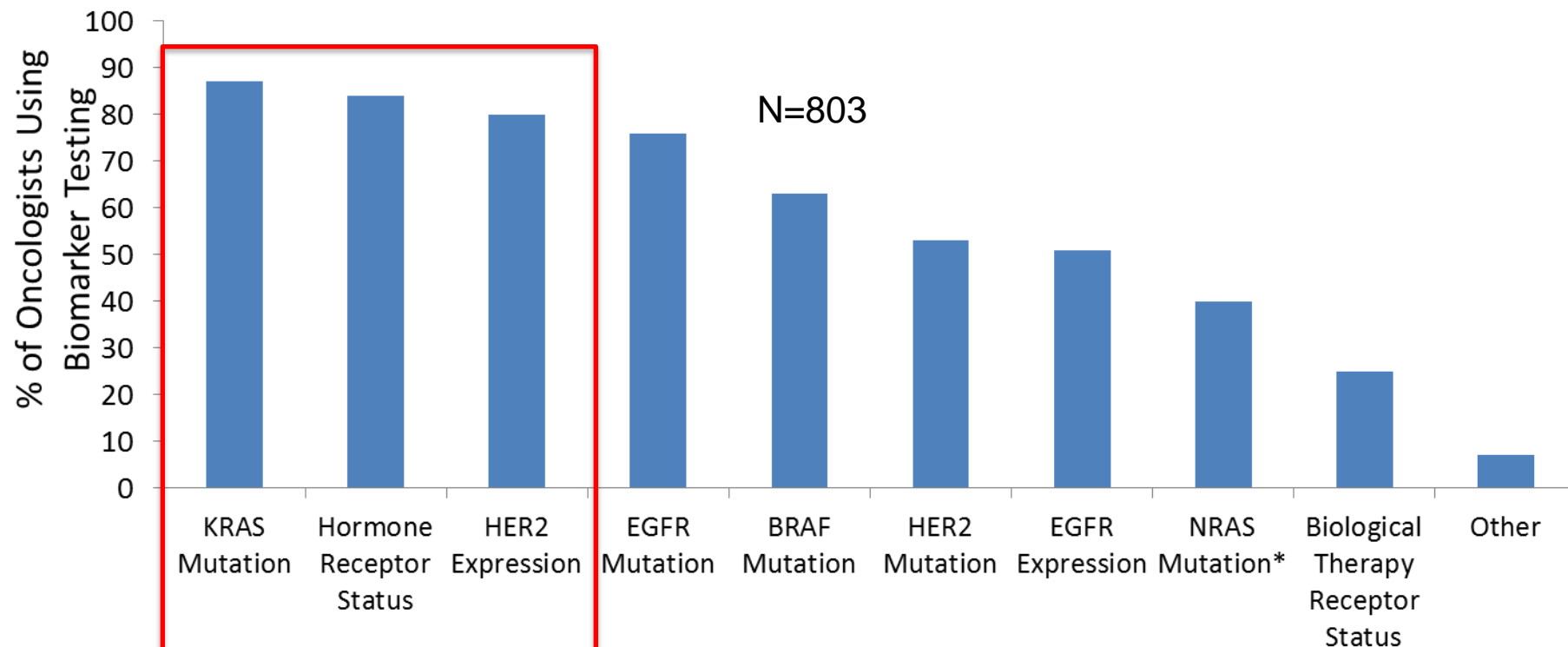
## The Majority of Patients Understand That It Is Possible to Have a Tumor Tested to Help Inform Treatment Decisions



## 90% of Oncologists Are Currently Using Biomarker Testing



## *KRAS* Mutation, Hormone Receptor Status, and HER2 Expression Are the Most Common Biomarker Tests<sup>a</sup>



## *KRAS* Mutation, Hormone Receptor Status, and HER2 Expression Are the Most Common Biomarker Tests (Cont)<sup>a</sup>

|                                   | BC<br>(n=281)<br>% | NSCLC<br>(n=187)<br>% | mCRC<br>(n=335)<br>% |
|-----------------------------------|--------------------|-----------------------|----------------------|
| <i>KRAS</i> mutation              | 84                 | 83                    | 91                   |
| Hormone receptor status           | 96                 | 79                    | 77                   |
| HER2 expression                   | 89                 | 73                    | 77                   |
| <i>EGFR</i> mutation              | 72                 | 88                    | 72                   |
| <i>BRAF</i> mutation              | 61                 | 65                    | 64                   |
| <i>HER2</i> mutation              | 52                 | 52                    | 54                   |
| EGFR expression                   | 54                 | 48                    | 50                   |
| <i>NRAS</i> mutation <sup>b</sup> | 38                 | 36                    | 45                   |



## What Motivates Oncologists to Use a Biomarker Test?

| What factors influence your decision to perform biomarker tests? | Total <sup>a</sup><br>(N=803)<br>% |
|--|------------------------------------|
| Results influence treatment options                              | 72                                 |
| Tests are part of treatment guidelines                           | 63                                 |
| Progression of disease   | 52                                 |
| Tests are available  | 47                                 |
| Results predict outcome  | 45                                 |
| Results are returned in timely manner                            | 29                                 |
| Patients are able to pay for the test                            | 23                                 |
| Testing facilities are available                                 | 17                                 |
| Cost to hospital   | 16                                 |
| Patient preference   | 14                                 |
| Logistics not established  | 11                                 |
| Not part of routine diagnosis                                    | 8                                  |
| Other  | 2                                  |

- Similar results were observed for BC, NSCLC, and mCRC physicians

## Why Are Some Oncologists Not Using Biomarker Testing?

| What factors influence your decision to <u>not</u> perform biomarker tests? | Total <sup>a</sup><br>(N=92)<br>% | BC<br>(n=29)<br>% | NSCLC<br>(n=12)<br>% | mCRC<br>(n=51)<br>% |
|---|-----------------------------------|-------------------|----------------------|---------------------|
| Cost  | 55                                | 66                | 25                   | 57                  |
| Tests are not available   | 47                                | 38                | 50                   | 51                  |
| Tests are not part of treatment guidelines                                  | 35                                | 24                | 50                   | 37                  |
| Results are returned too slowly   | 14                                | 7                 | 33                   | 14                  |
| Physician doesn't want to delay treatment                                   | 10                                | 14                | –                    | 10                  |
| Patients don't want to delay treatment                                      | 10                                | 7                 | 8                    | 12                  |
| Patients don't understand the benefits                                      | 10                                | –                 | 8                    | 16                  |
| Results do not predict outcome  | 10                                | –                 | 25                   | 12                  |
| Results do not influence treatment options                                  | 7                                 | –                 | 17                   | 8                   |
| Other   | 2                                 | 7                 | –                    | –                   |
| Don't know  | 8                                 | 10                | 8                    | 6                   |

## What Would Provide an Impetus for Oncologists to Use Biomarkers More Extensively?

| What would help you use biomarker tests more often?  | Total<br>(N=895)<br>% |
|--|-----------------------|
| Greater availability of tests                        | 59                    |
| Overall reduction in cost                            | 55                    |
| Reduction in time to results                         | 51                    |
| Improved reimbursement for testing                   | 43                    |
| Inclusion in treatment guidelines                    | 42                    |
| Training for myself                                  | 38                    |
| Information to help patients understand testing      | 34                    |
| Other  | 2                     |
| Nothing would help me use biomarker tests more often | 5                     |

- Similar results were observed for BC, NSCLC, and mCRC physicians

## The Vast Majority of Oncologists Believe That Their Patients Would React Positively to Biomarker Testing

|  | Yes % | No % | Don't Know % |
|--|-------|------|--------------|
| Patients would <b><u>delay treatment for tumor testing</u></b> if they could receive a drug that might work better for them. | 82    | 10   | 8            |
| Patients would allow <b><u>re-biopsy of a tumor</u></b> if they could receive a drug that might work better for them.        | 85    | 7    | 8            |
| Patients would <b><u>allow the hospital to keep a sample</u></b> for future research.  | 93    | 2    | 5            |

- However, among physicians indicating that patients would be willing to delay treatment, 81% perceive that patients would only be willing to wait  $\leq 2$  weeks
  - 14% believe that their patients would be willing to delay up to 1 month

## Importance of the Multidisciplinary Team

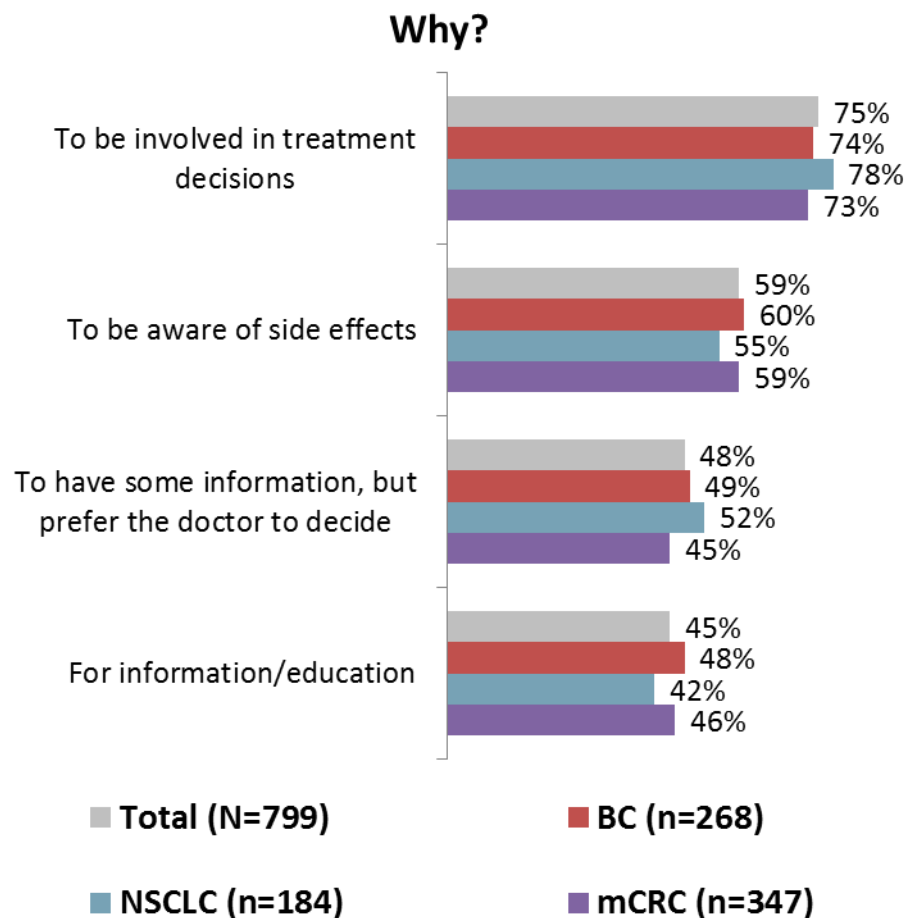
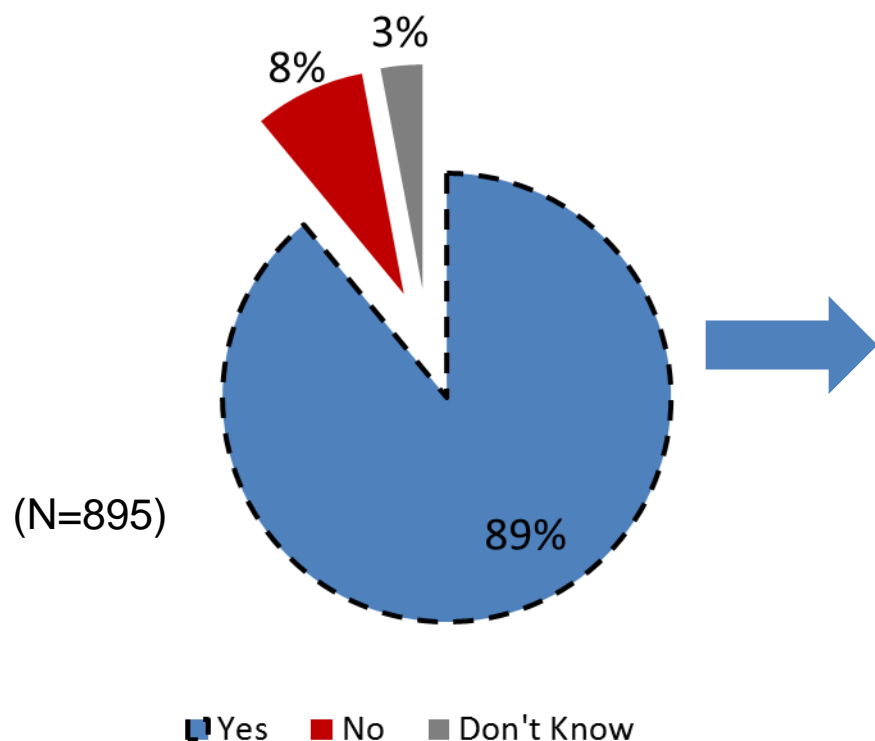
- 82% of oncologists believe that the treatment decision process is shared between the doctor and/or multidisciplinary team and the patient
- Oncologists feel that nurses are the best source of information for their patients
  - However, only 45% of oncologists think that their patients had access to nurse support

## Oncologists Believe That Their Patients Are Not Optimally Informed, Which May Complicate Patient Participation in the Decision-Making Process

- Only 23% of oncologists believe that their patients were always fully informed and understood their treatment when it was explained to them
- 78% of oncologists think that their patients need more information to help them understand the different types of cancer and how cancers progress

A clear need exists for patients to have access to additional sources of information that will allow them to more fully understand their treatment options and thereby better engage in decision making

# Do Your Patients Want You to Provide Information About All Available Treatment Options?



## Conclusions

- Oncologists are aware of the value of biomarker testing and the importance of personalized medicine
- However, oncologists believe that their patients are not currently well informed enough about their options to fully participate in treatment decisions



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