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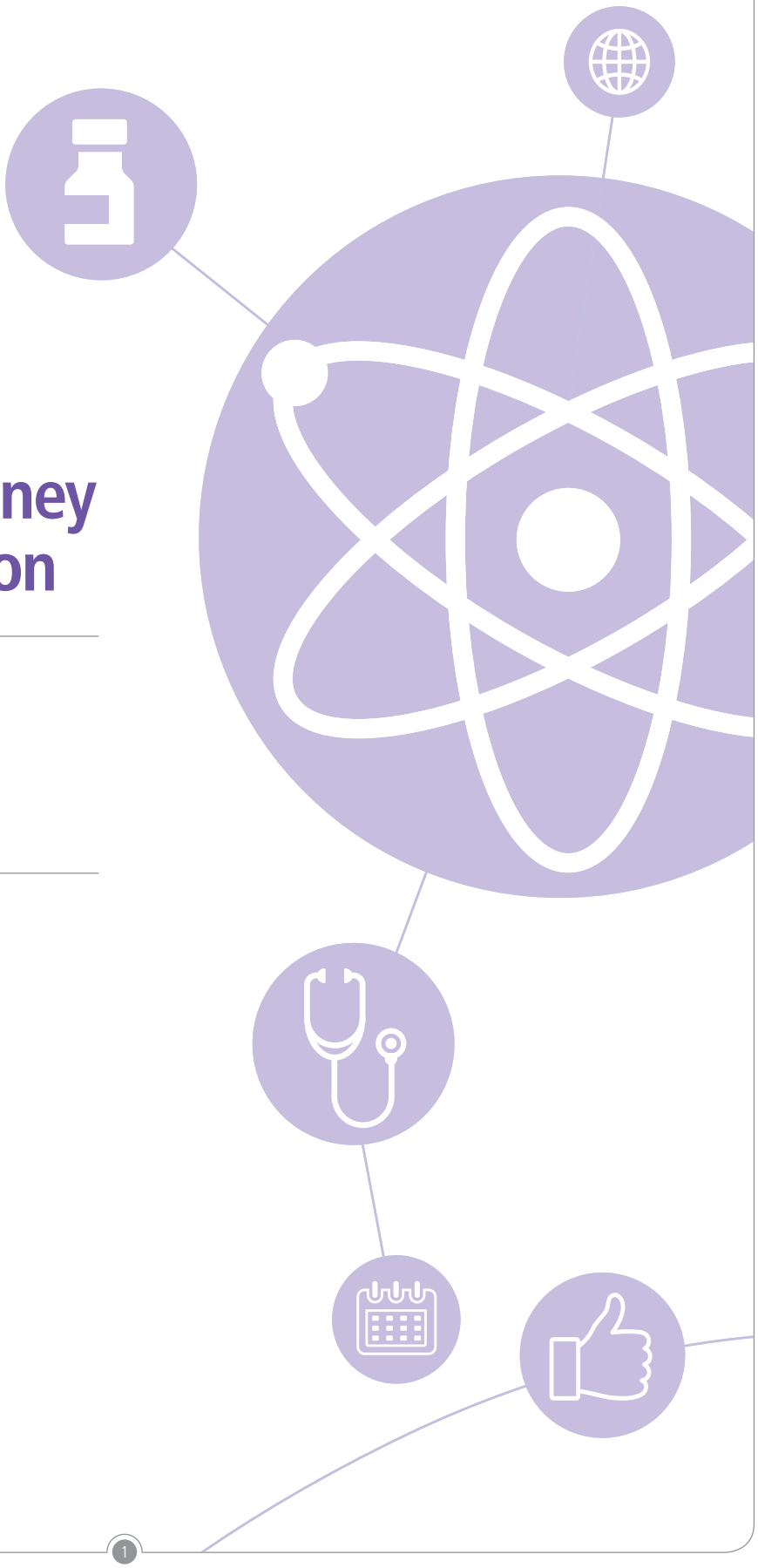

The Patient Journey in High Resolution

Innovating for a richer understanding of the patient journey

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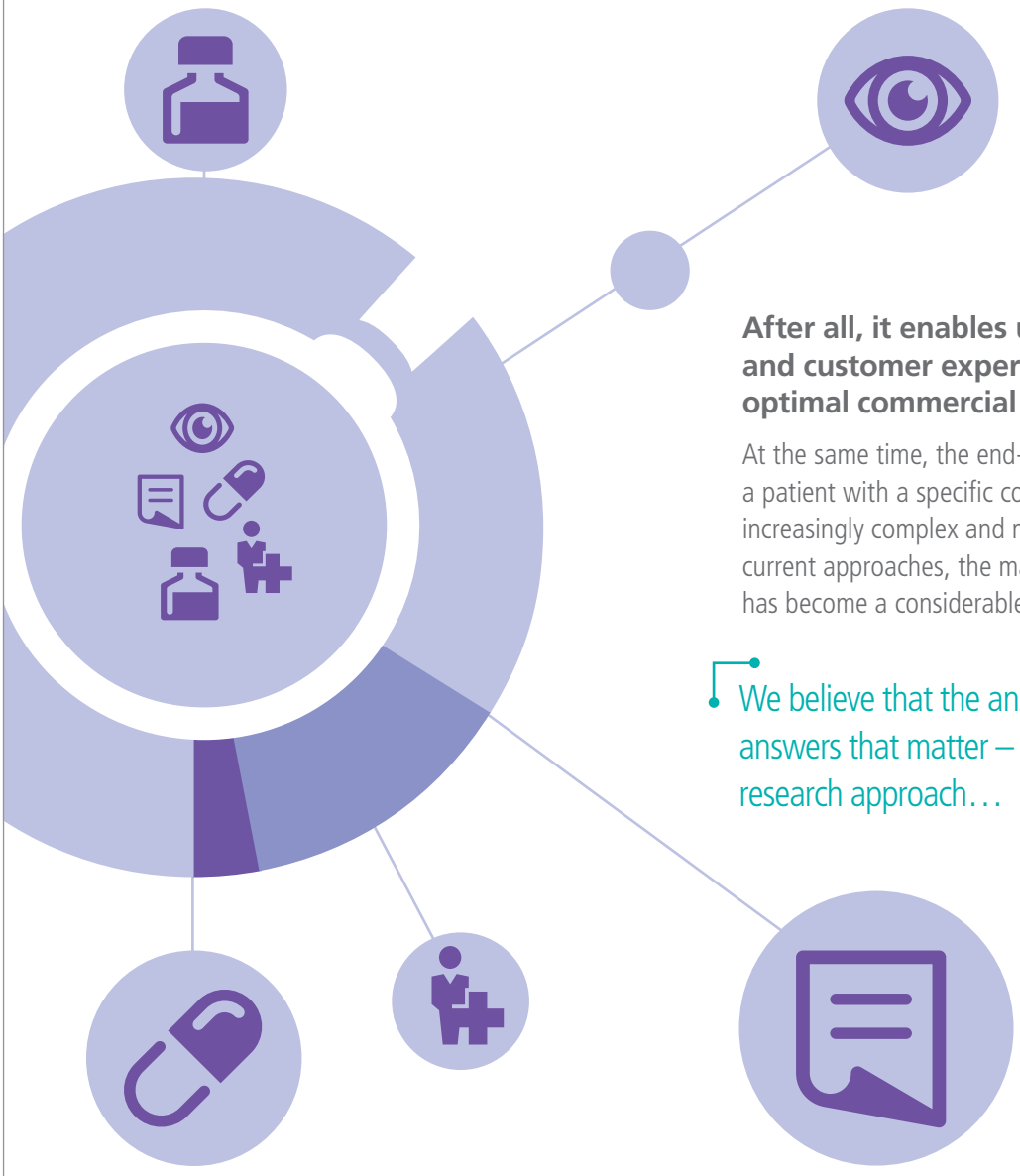
Achieving a rich, yet rigorous, view of the patient journey is the Holy Grail for marketers.



After all, it enables us to design programs and customer experiences that support optimal commercial and health outcomes.

At the same time, the end-to-end experience of a patient with a specific condition has become increasingly complex and multi-faceted. Based on current approaches, the market researcher's task has become a considerable challenge.

We believe that the answer – indeed all the answers that matter – lies in a multi-disciplinary research approach…

Clarity from Complexity

It's no secret that the power shifts within today's healthcare marketplace are complicating the dynamics of brand choice. The growing influence of payers, patients and other HCPs continues to erode the physician's traditional dominance, while regulatory intervention is creating more restrictions than ever before.

For the market researcher, creating a holistic picture of the patient journey is no easy task. How, for example, do we identify who is making actual diagnoses and who is simply involved in treatment? How do we gain a transparent picture of the decision-making processes? How do we gauge patients' and payers' influence on prescribing decisions or the impact of availability on treatment selection? And how do we account for the differing perceptions of healthcare's multiple stakeholders…?

Creating the Framework

Fortunately, the foundation and framework for complex patient journey mapping is clear. The starting point is to be found in the range of secondary and syndicated data sources available to pharmaceutical companies: secondary reports from providers like Decision Resources; epidemiology data from the likes of Globocan; and syndicated data from providers such as Ipsos Healthcare.

These sources have value throughout the product lifecycle, from business development during R&D (NPD and clinical studies) to launch strategies in the pre-launch phase (understanding the market and competitive landscape) to lifecycle management in post-launch (reviewing performance and projecting volume). Taking as our example Ipsos' Global Therapy Monitors – the world's largest source of syndicated patient chart audit data – the applications of this data are many and varied:

Understand market size and competitive structure

- Validate knowledge of current treatment practices in the disease area
- Quantify the size of the prescribing opportunity

Track competitor product use, patient types, etc.

- Monitor the impact of new treatment strategies
- Assess competitor performance
- Understand how these products are used across indications (and off-label usage)

Gauge new product uptake / penetration

- Identify where penetration is lower / higher than expected

Provide forecast inputs for potential products

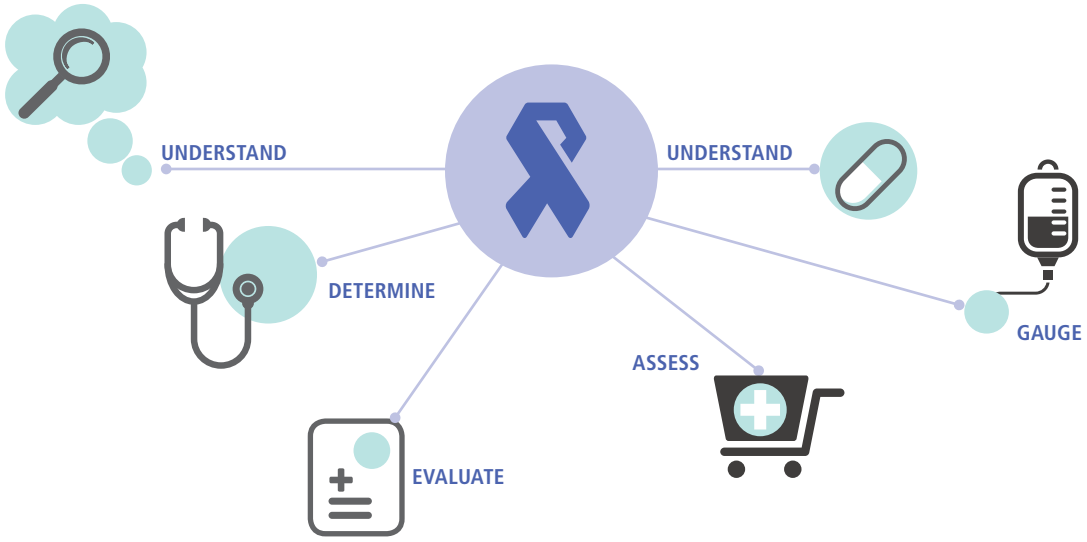
- Market shares
- Adoption curves

Assess treatment outcomes by regimen

- Calculate the proportion of patients that had a good response
- Identify the number of patients who fail treatment
- Identify the number of patients who stop treatment due to side-effects

Compare doctor perceptions versus actual prescribing behavior

- Understand what attributes doctors rate as the most important in prescribing and how certain products perform on these attributes
- Understand what the main unmet needs for doctors are



Adding Richness to the Rigour

In order to understand the specifics, let's consider our case study example of the melanoma patient journey. Our syndicated oncology data gives us some highly valuable information: the full picture of anti-cancer drug treatment; diagnosis patterns; treatment algorithms; switching information; and more. However, questions still remain. We don't yet know the issues around using products or regimens of choice. We don't yet have a complete understanding of the flow of patients from initial symptoms to diagnosis to treatment follow-up.

This all changes, however, when we add a component of multi-stakeholder qualitative research.

With qualitative perceptions obtained from a variety of stakeholders – not just physicians but also patients, payers, pharmacists and other HCPs – we can achieve a whole new realm of understanding:

Understand where the process begins

- Does the patient perceive a problem and seek help?
- What HCP is the typical initial point of contact?

Determine the typical diagnosis approach

- What are the key specialties involved in diagnosis?
- Is it a team approach?
- How long does the process take?

Evaluate the referral process

- Are patients referred for diagnosis and/ or treatment decisions?
- At what point are different specialties involved?
- What does each specialty perceive their role to be?

Assess considerations in the treatment decision

- How involved is the patient in the treatment decision?
- Are all treatment options – including new ones – discussed?
- What impact does insurance / cost of treatment have?

Gauge how patients move through different treatment modalities

- What is the typical initial treatment?
- In what circumstances is a 'watch and wait' approach taken?
- When is chemotherapy treatment initiated?

Understand the patient impact

- What is the impact on patient QoL?
- How do patients perceive the occurrence / severity of SEs?
- Are patients compliant with supportive care?
- Do they take non-recommended OTC drugs?

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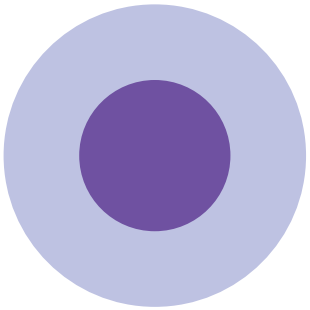
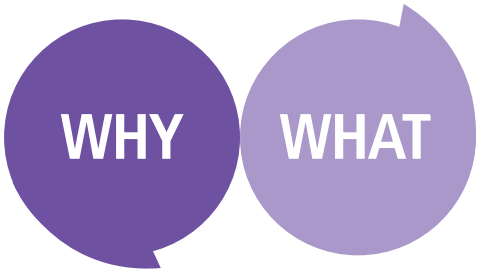


The combined approach delivers commercially-meaningful research that includes the 'why' as well as the 'what – with integrated findings from multiple stakeholders revealing a more accurate picture of market dynamics.



The business-oriented deliverables include an ability to gauge the importance, influence and role of different stakeholders, to understand the disconnects between multiple stakeholders, to identify targeted messages for different stakeholder segments, and more.

In addition, the structure is both modular and refreshable, allowing us to add additional stakeholders in the future and refresh (not repeat) the process if market dynamics change. This offers substantial cost efficiences – as does the fact that we can achieve a whole new realm of insight and understanding from syndicated data that companies already subscribe to.

In summary, the combination of syndicated data and qualitative custom research delivers a rich, holistic picture of the patient journey – in an efficient and cost effective way.

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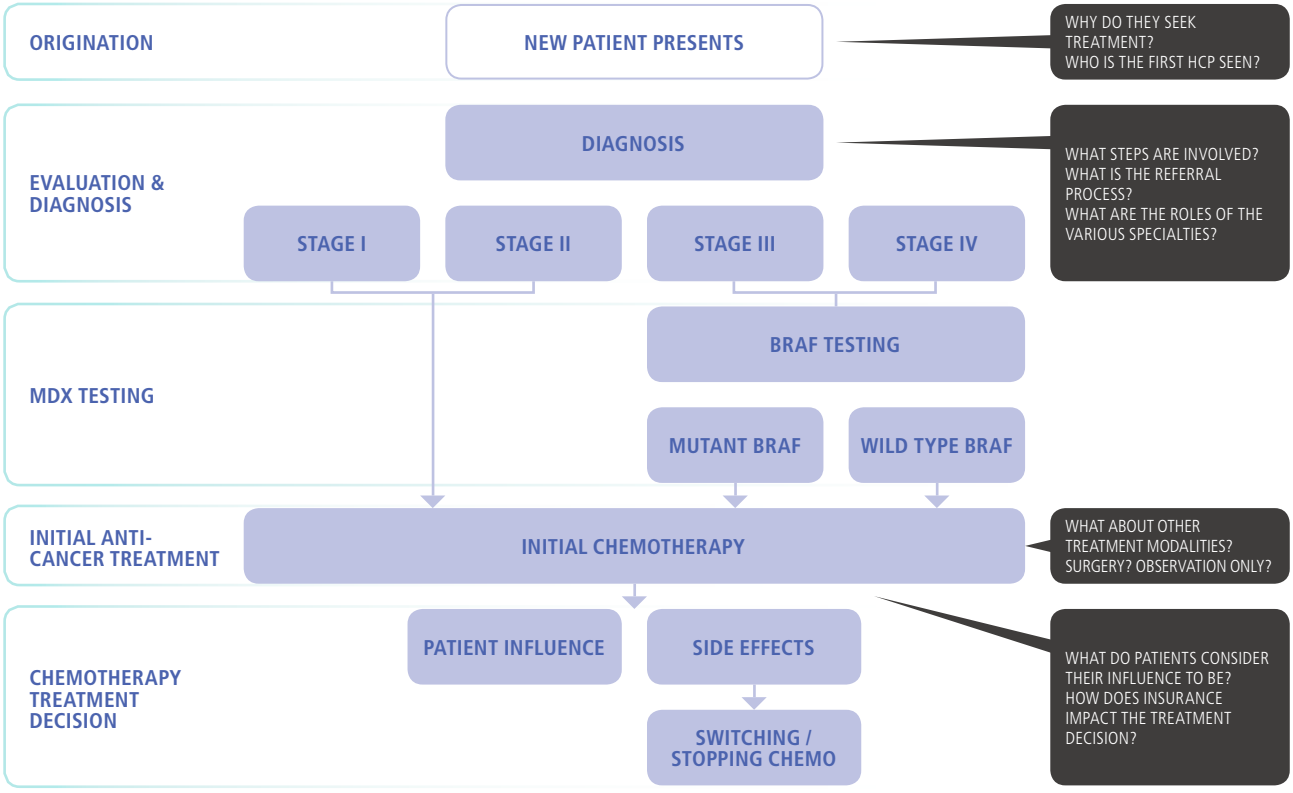
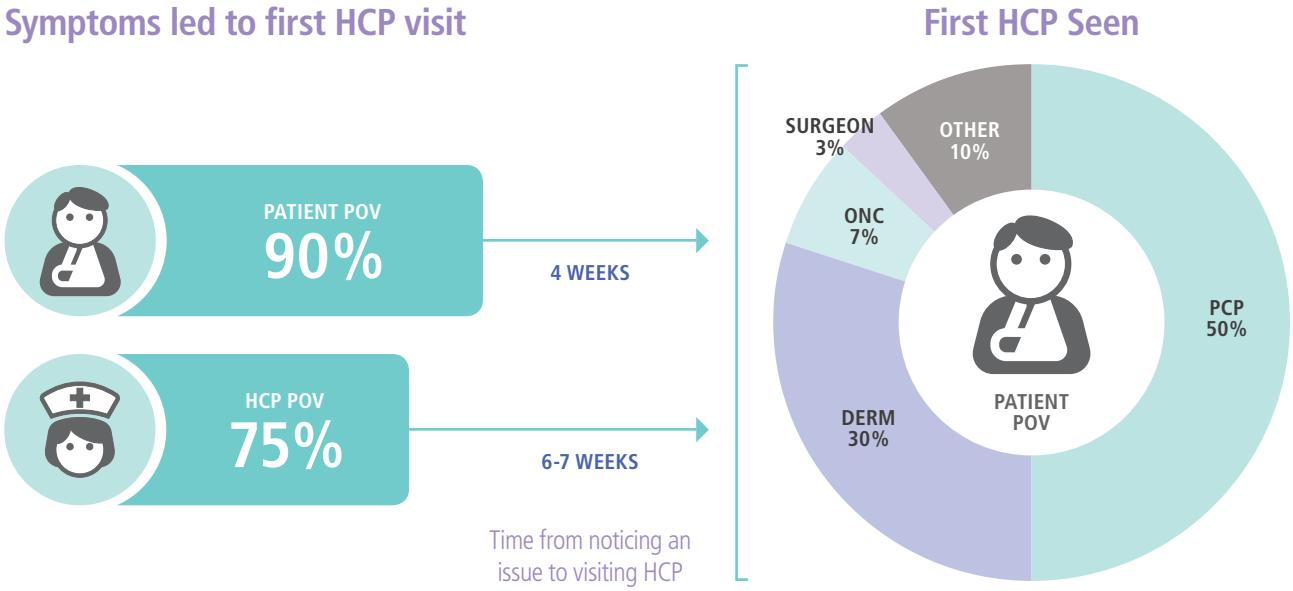
Case Study: The Melanoma Patient Journey

The following case study shows the combined approach in action. Specifically, we can see how a patient journey mapping based on syndicated oncology data can be enhanced (providing much more than just 'patient flows') when enriched with perceptions gained from multi-stakeholder qualitative research...

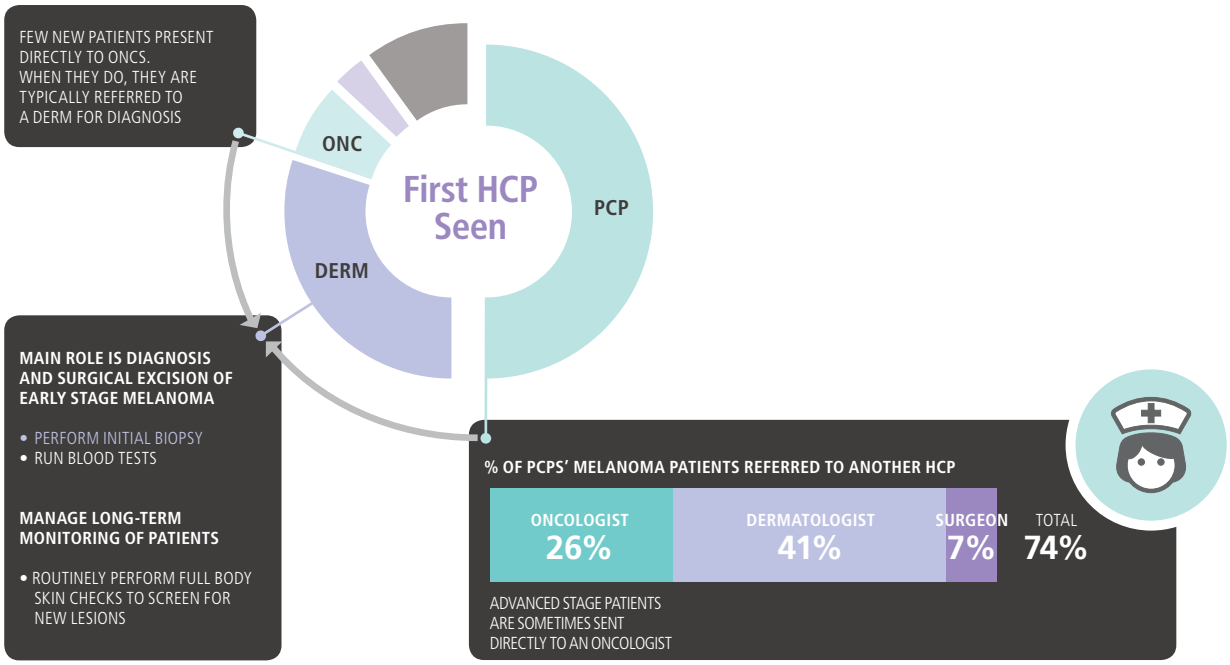
Current secondary data sources, including Ipsos Healthcare's Global Oncology Monitor, provide a wealth of detailed information on melanoma. However, to achieve a true understanding of the patient journey, perceptual information from various stakeholders should be used to 'fill in the gaps' – as demonstrated by Figure 1:



Looking at how the patient journey begins, we know from the Monitor's perceptual physician questionnaires that it is typically with a visit to the PCP or dermatologist. However, if we collect data from both physicians and patients, we can identify where perceptions diverge, as indicated in Figure 2:

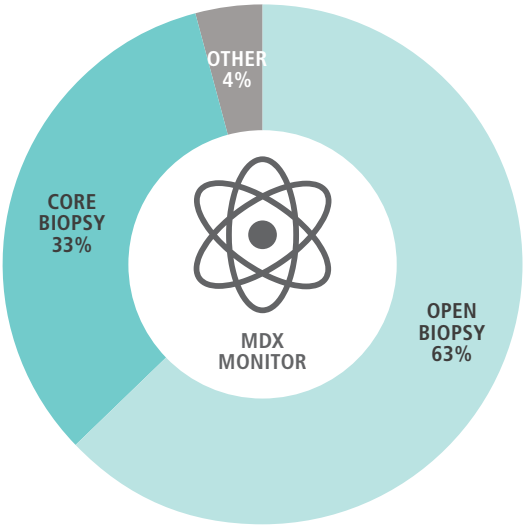


Following the initial HCP visit, the path to diagnosis can take several weeks and involve specialist referrals – usually to a dermatologist. The syndicated perceptual questionnaires provide us with insights into the various nuances that occur depending upon where the journey starts – as we can see from Figure 3:

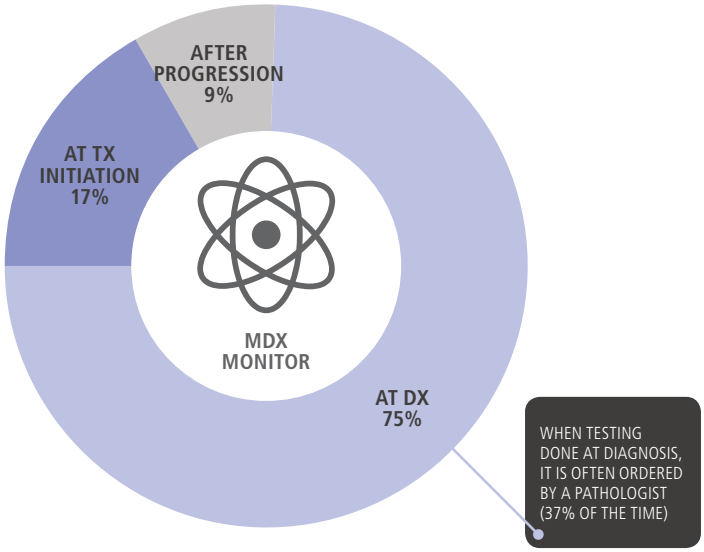


So how does biologic marker testing fit in, and what type of biopsy is performed? Biopsies are most frequently used for melanoma, and when BRAF mutation testing is done it generally takes place at diagnosis stage. Additional detailed information specific to biopsy and biologic marker testing is available from Ipsos Healthcare's MDx Monitor; this data source also incorporates the role of the pathologist, adding another viewpoint to the overall journey:

Biopsy Type



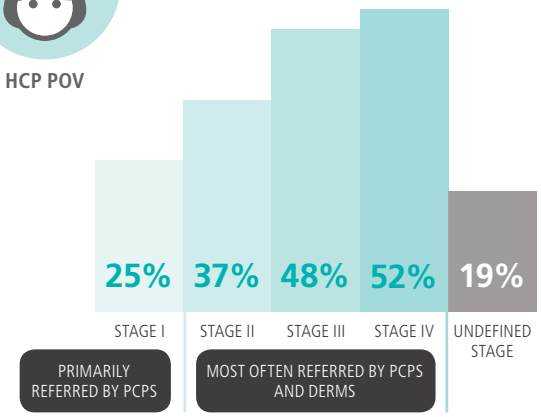
Timing of BRAF Marker Testing



Once the diagnosis is made, we need to identify who delivers the treatment. Depending on the stage at diagnosis, patients may be referred on to another specialist for treatment. Perceptual data provides an overall look at referrals by stage and, specifically, Global Oncology Monitor data provides a more detailed look at specialties referring Stage III/IV melanoma patients to Oncologists, as shown in Figure 5:

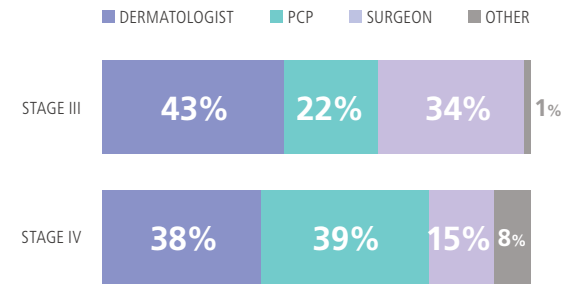
HCP POV

% of Melanoma Patients Referred, by Stage



ONCOLOGY MONITOR

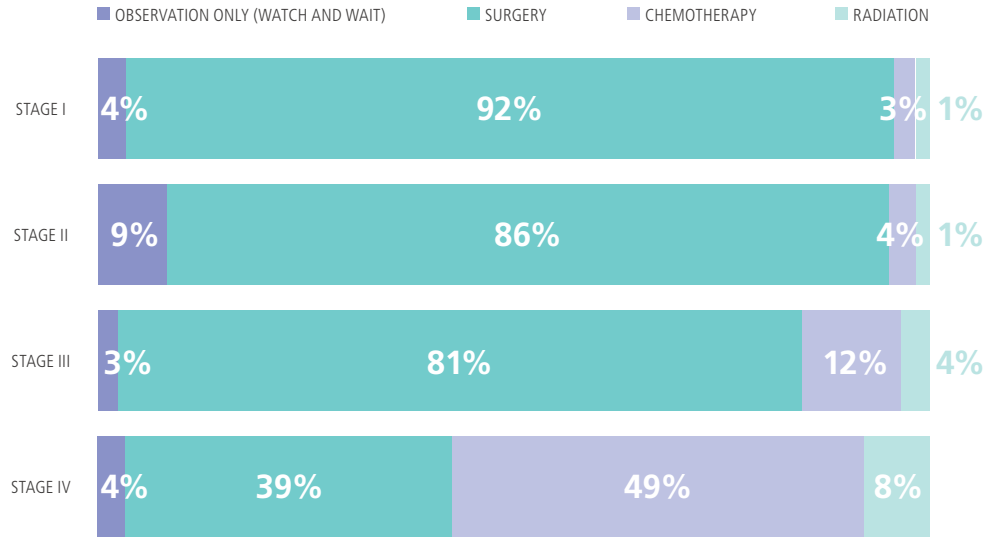
% of Newly Diagnosed Melanoma Patients Referred BY Each Specialty To Oncologist



We then need to understand what the initial treatment is. Up to Stage IV, surgery is the dominant initial treatment for melanoma patients. Physician perceptual data provides a view of the treatment paradigm for earlier stage patients, including those who are not undergoing any treatment (watch and wait).

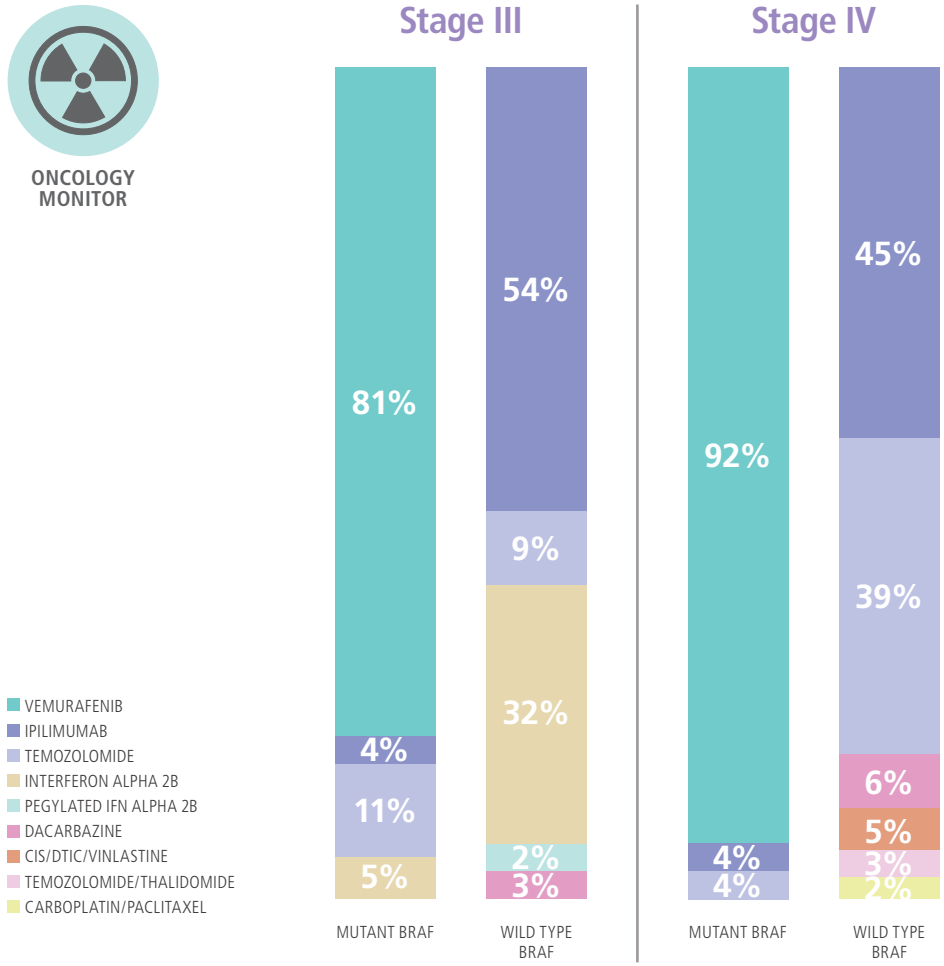
HCP POV

Initial Melanoma Treatment, by Stage



Our next objective is to achieve a better understanding of the initial chemotherapy and how treatment is impacted by BRAF testing. Accordingly, our research shows that BRAF mutation testing results strongly drive the treatment decision. Mutant BRAF is predominantly treated with vemurafenib; wild type BRAF treatment is somewhat more diverse – as detailed in Figure 7:

ONCOLOGY MONITOR



We also want to understand why chemotherapy is switched. Physicians perceive reasons for switching / stopping chemotherapy to center largely on progression and toxicity; secondary data provides additional detail by looking at switches to specific therapies and among different BRAF groups, as shown in Figure 8:

HCP POV

Why chemo SWITCHED

DISEASE PROGRESSION / LACK OF EFFICACY

TOXIC / NOT TOLERATED
(EVEN WITH MAX SUPPORTIVE CARE)

Why chemo STOPPED

DISEASE PROGRESSION / LACK OF EFFICACY

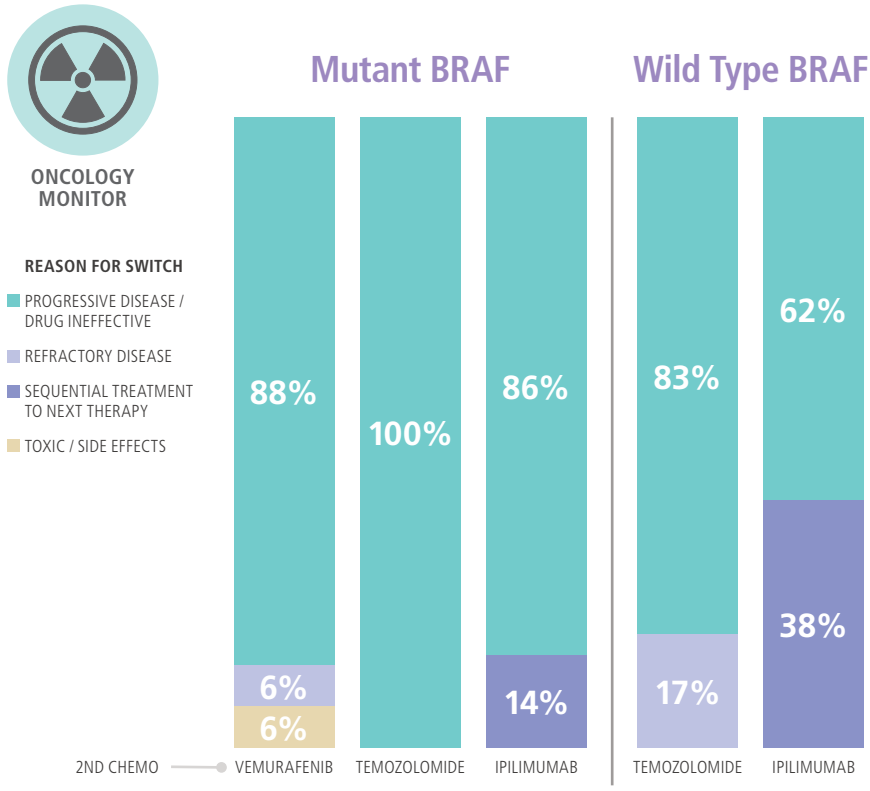
TOXIC / NOT TOLERATED

POOR / DECLINING STATUS

PATIENT REQUEST TO STOP

NO OTHER OPTIONS

ONCOLOGY MONITOR

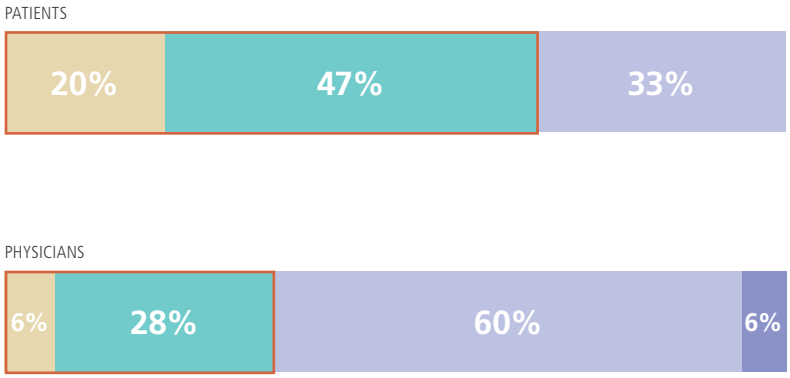


And how involved is the patient in the treatment decision? Patients believe they are more in control of the treatment decision than physicians perceive them to be. Our syndicated data shows that patient involvement declines as disease stage progresses.

Patient Role in Tx Decision

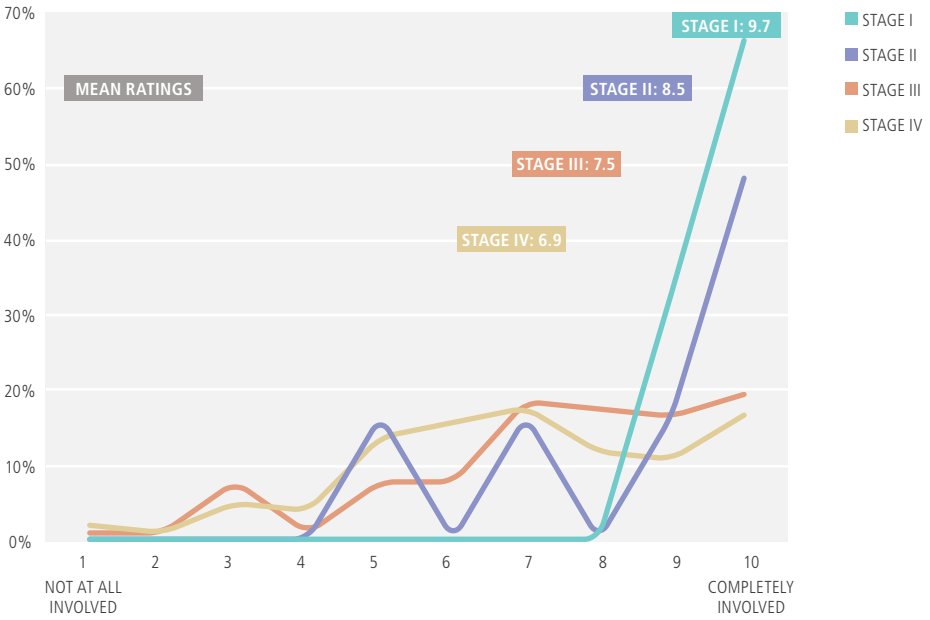
PATIENT POV

HCP POV



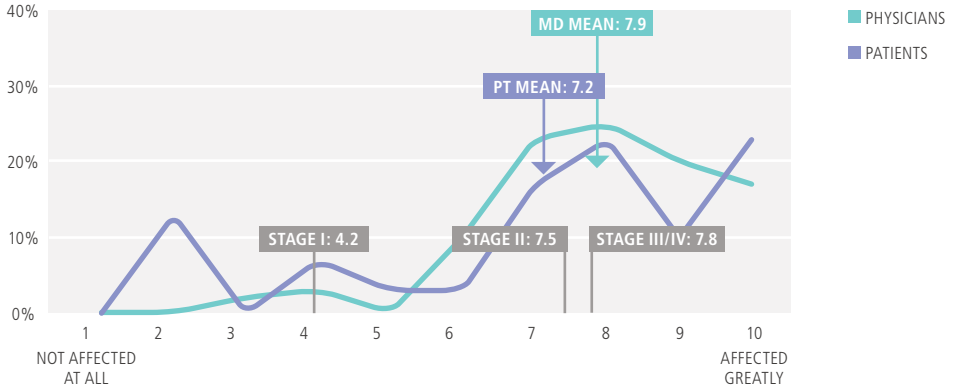
ONCOLOGY MONITOR

Patient Role in Chemotherapy Decision



Finally, and critically, what is the impact of melanoma on patients' Quality of Life? Going beyond the numbers, perceptual questions allow for an understanding of the true feelings and frustrations of those involved, as revealed by Figure 10.

Perceived Impact on QoL



LIFESTYLE IMPACT

- TIRED ALL THE TIME / WEAKNESS / HAVE TO DEAL WITH TREATMENT SES
- LIMITED ABILITY TO WORK / PERFORM DAILY ACTIVITIES DUE TO TREATMENT
- NEED TO STAY INDOORS / DON'T LEAVE HOME
- CHANGE IN ATTITUDE TOWARD SUN EXPOSURE

EMOTIONAL CONSEQUENCES

- MENTAL/EMOTIONAL IMPACT – DWELLING ON CONSEQUENCES, DEPRESSED
- LOSS OF SLEEP

PATIENT POV

"MADE ME MORE AWARE THAT MY HEALTH CARE IS MY RESPONSIBILITY AND THE DOCTORS JUST GO THROUGH THE MOTIONS, TILL SOMEONE SAYS LOOK AT ME!"

STAGE IV PATIENT

EMOTIONAL CONSEQUENCES

- FEAR, CHRONIC ANXIETY, UNCERTAINTY ABOUT THE FUTURE
- SIGNIFICANT AFFECT ON EMOTIONAL AND MENTAL STATE

LIFESTYLE IMPACT

- LIFE-CHANGING DIAGNOSIS – AFFECTS WELL-BEING AND ALTERS LIFESTYLE
- HAVE TO DEAL WITH PAIN / TREATMENT-RELATED SES
- NEED TO MAKE MULTIPLE VISITS TO SPECIALISTS

HCP POV

"IT MAKES THEM FACE THEIR MORTALITY."

ONCOLOGIST

And thus the true patient journey emerges. By combining data sources and obtaining various perceptions, the narrow understanding of the patient journey is transformed into a true picture of what transpires for melanoma patients and those involved in the process, bringing to light knowledge gaps and areas of opportunity.