MDForLives

THE GLOBAL PULSE OF HEALTHCARE · MDFORLIVES INSIGHT REPORT

MRD Is Becoming a Decision Gap

Responses from practicing oncologists on minimal residual disease: where clinicians trust the signal, where they hesitate to act, and why the future of MRD may depend less on sensitivity than on thresholds, context, and care pathways.

Real Opinions · **Clinical Patterns** · **Validated by Data**

73	59	6	80.8%
total responses captured	complete responses	countries represented	survey completion rate

WHY THIS REPORT

MRD is not being rejected. It is being negotiated at the bedside.

Minimal residual disease is increasingly central to oncology conversations because it can reveal residual cancer activity that conventional assessments may not detect. The clinical promise is clear: earlier relapse detection, better risk stratification, and more refined monitoring. Yet the MDForLives data shows a more complex reality. Clinicians do not simply ask whether MRD is useful. They ask whether a positive signal is strong enough to change treatment, whether the threshold is meaningful, whether acting early may help or harm, and whether the patient can absorb the uncertainty.

This report interprets responses from oncology and hematology-oncology healthcare professionals in the United States, Italy, the United Kingdom, Canada, Germany, and France. It follows MRD through the real clinical tension in the data: a sensitive signal is becoming more visible, but the action framework around that signal is still uneven.

> **How to read this report.** The survey includes one country-punching question, ten closed clinical opinion questions, and one open-ended question. Closed-question denominators vary slightly because partial responses were included in earlier questions: Q2 and Q3 use n=60, while Q4 to Q11 use n=59. Percentages and counts are reported exactly as captured in the source report. Findings describe clinician perception and reported practice patterns, not treatment recommendations.

EXECUTIVE SUMMARY

Six findings that separate molecular confidence from clinical action.

INSIGHT 01

MRD is a meaningful signal, but not yet a universal decision authority

71.6% describe MRD as either decisive or useful, but only **33.3%** say it meaningfully changes what they do. The majority position is trust with restraint.

INSIGHT 02

Influence remains concentrated where MRD has the strongest practice memory

MRD most influences **hematologic malignancies (36.7%)** and **post-treatment surveillance (26.7%)**. Solid tumor and escalation settings remain more selective.

INSIGHT 03

The field values MRD for seeing earlier, not always for acting earlier

Early relapse detection, monitoring over time, and escalation support together dominate clinical utility. De-escalation trails at **10.2%**, showing that confidence is asymmetric.

INSIGHT 04

The biggest friction is not detection. It is interpretation.

44.1% describe noticeable variability, high inconsistency, or no consensus in MRD interpretation. Another **32.2%** say unclear thresholds are the uncomfortable reality.

INSIGHT 05

MRD-clinical mismatch creates caution rather than automatic escalation

When MRD and conventional indicators do not align, **47.5%** say concern rises but evidence for acting remains unclear; **30.5%** say both signals require judgment.

INSIGHT 06

The expected future is essential, but bounded

45.8% expect MRD to become essential only in tightly defined scenarios, while **32.2%** see it remaining complementary rather than directive.

01

SECTION 01

MRD has crossed the relevance threshold, but not the decision threshold

71.6% say MRD is either decisive or useful in practice today

CONTEXT

The first test of MRD adoption is not whether clinicians know what it is. It is whether the signal changes what they do when facing treatment, surveillance, or escalation decisions.

WHAT THE DATA SHOWS

Among 60 respondents, 20 clinicians (33.3%) call MRD a decisive tool that meaningfully changes practice, while 23 (38.3%) call it a useful signal that is rarely the deciding factor. Another 11 (18.3%) experience MRD as an additional layer of complexity.

THE INSIGHT

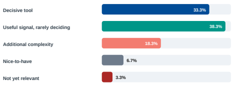
This is not a field resisting MRD. It is a field placing MRD in a hierarchy of evidence. Clinicians appear willing to use MRD as a sensitive risk signal, but many still stop short of allowing it to override conventional clinical context.

WHY IT MATTERS

The adoption question has moved from awareness to governance. The next clinical gap is not convincing oncologists that MRD matters; it is clarifying when MRD should move from signal to action.

Q2 - How MRD functions in practice today

Exact response values from the MDForLives MRD oncology survey.



02

SECTION 02

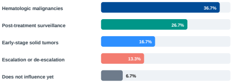
MRD influence is strongest where clinical pathways are already prepared for it

63.4% place MRD influence in hematologic malignancies or post-treatment

Q3 - Where MRD most influences practice today

Influence remains concentrated in blood cancers and surveillance.

surveillance



CONTEXT

MRD is not a single-use clinical concept. Its relevance changes depending on tumor type, treatment setting, timing, assay availability, and the strength of evidence linking a molecular result to a clinical next step.

WHAT THE DATA SHOWS

Hematologic malignancies are the leading setting at 36.7% (22/60), followed by post-treatment surveillance at 26.7% (16/60). Early-stage solid tumors sit at 16.7% (10/60), while escalation or de-escalation decisions are at 13.3% (8/60).

THE INSIGHT

MRD is most influential where clinicians can connect the test result to a familiar decision pathway. Its weaker influence in early-stage solid tumors and treatment modulation suggests that molecular sensitivity alone is insufficient; clinicians need disease-specific evidence and action rules.

WHY IT MATTERS

MRD expansion into broader oncology practice will likely be uneven. The fastest path to adoption is not a universal MRD message, but scenario-specific clinical guidance that tells clinicians what the result can responsibly change.

03

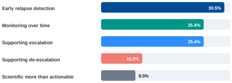
SECTION 03

The field trusts MRD more for detection and monitoring than for de-escalation

81.3% place MRD's usefulness in early relapse detection, monitoring, or escalation support

Q4 - Where MRD feels most clinically useful today

Utility clusters around early detection, monitoring, and escalation.



CONTEXT

Clinical utility is not one-dimensional. A test can be useful for detecting relapse, tracking disease over time, supporting escalation, or giving confidence to de-escalate. Those use cases carry different risk profiles.

WHAT THE DATA SHOWS

Early relapse detection leads at 30.5% (18/59). Monitoring disease over time and supporting escalation decisions each sit at 25.4% (15/59). Supporting de-escalation is much lower at 10.2% (6/59), while 8.5% say MRD feels scientifically interesting more than clinically actionable.

THE INSIGHT

Clinicians seem more comfortable using MRD to identify risk than to remove treatment pressure. That asymmetry matters. Escalation feels easier to justify when a molecular signal suggests residual disease; de-escalation requires confidence that absence or reduction of signal is safe enough to withhold or reduce therapy.

WHY IT MATTERS

MRD-guided care will remain conservative unless de-escalation evidence becomes as actionable as relapse-detection evidence. Without that, MRD may increase surveillance intensity and treatment pressure more than it reduces burden.

04

SECTION 04

Interpretation variability is the hidden adoption barrier

44.1% report variability, inconsistency, or lack of consensus in interpretation

CONTEXT

A test can be analytically powerful and still clinically uneven if clinicians interpret results differently across institutions, disease stages, assay platforms, or patient contexts.

WHAT THE DATA SHOWS

Only 25.4% say MRD interpretation is highly consistent. A further 30.5% say it is mostly consistent with some variation. But 30.5% report noticeable variability, 10.2% report high inconsistency, and 3.4% say there is no real consensus yet.

THE INSIGHT

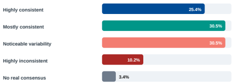
MRD is entering practice faster than shared interpretation norms are maturing. The result is a paradox: clinicians may agree that the signal matters while disagreeing on what the signal means.

WHY IT MATTERS

For HCPs, the key need is not only better assays. It is interpretive infrastructure: thresholds, timing rules, reporting language, repeat-test logic, and disease-specific pathways that reduce subjective variation.

Q5 - Consistency of MRD interpretation among clinicians

The field is split between shared understanding and variability.



Derived insight signals

Combined values calculated from exact survey responses, not modeled estimates.

71.6%

MEANINGFUL SIGNAL

33.3% call MRD decisive and 38.3% call it useful, though rarely the deciding factor.

55.9%

THRESHOLD-ACTION GAP

23.7% say MRD detects disease earlier than clinicians know how to act, and 32.2% cite unclear thresholds.

71.2%

OVERREACTION RISK

22.0% see high risk and 49.2% see moderate risk of unnecessary treatment changes or over-response.

78.0%

BOUNDED FUTURE ROLE

45.8% expect essential use in tightly defined scenarios and 32.2% expect a complementary role.

05

SECTION 05

When MRD and conventional indicators conflict, clinicians do not automatically escalate

78.0% say mismatch requires unclear-evidence caution or subjective clinical judgment

Q6 - What happens when MRD and conventional indicators do not align

The most common response is concern without clear evidence for action.

CONTEXT

The hardest MRD decisions emerge when the molecular signal and conventional indicators do not point in the same direction. That is where sensitivity meets clinical consequence.

WHAT THE DATA SHOWS

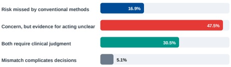
Only 16.9% say MRD reveals risk that conventional methods may be missing. The largest group, 47.5%, says MRD raises concern but evidence for acting is unclear. Another 30.5% say both signals require subjective interpretation and clinical judgment.

THE INSIGHT

MRD is not yet functioning as an automatic override. In discordant situations, clinicians appear to use MRD as a prompt for deeper assessment rather than a standalone trigger for treatment change.

WHY IT MATTERS

The most important MRD guidance may not be for clear positives or clear negatives. It may be for discordance: what to repeat, how soon to retest, when to image, when to escalate, and how to discuss uncertainty with patients.



06

SECTION 06

The overreaction risk is real because MRD can create action before certainty

71.2% see high or moderate risk of overreacting to MRD signals

CONTEXT

MRD can detect disease activity earlier than conventional methods. That early visibility is clinically valuable, but it can also create pressure to act before the evidence for the next intervention is settled.

WHAT THE DATA SHOWS

High risk is selected by 22.0% (13/59), and moderate risk by 49.2% (29/59). Only 23.7% describe risk as low, and just 5.1% say overreaction is not a concern.

THE INSIGHT

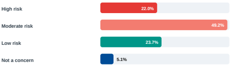
This is the emotional and clinical shadow of MRD adoption. A sensitive signal can create a sense of obligation before it creates a clear treatment mandate. The open responses echo this tension through concerns about overtreatment, false recurrence, and less molecular anxiety if MRD were removed.

WHY IT MATTERS

Responsible MRD adoption needs safeguards against reflex escalation. A positive MRD result should not only trigger clinical attention; it should trigger a structured decision process that weighs disease setting, assay confidence, patient risk, treatment toxicity, and patient preference.

Q7 - Perceived risk of overreacting to MRD signals

High plus moderate risk totals 71.2%.



07

SECTION 07

The uncomfortable reality is threshold uncertainty, not lack of belief

32.2% say unclear thresholds are the most uncomfortable reality of MRD today

CONTEXT

The survey asked clinicians to name the uncomfortable reality of using MRD. This is where the data moves beyond adoption and into the practical burden of interpretation.

WHAT THE DATA SHOWS

Unclear thresholds for meaningful change lead at 32.2% (19/59). Another 23.7% say clinicians detect disease earlier than they know how to act on it. Access and cost are selected by 22.0%, evidence lag by 13.6%, and patient communication difficulty by 8.5%.

THE INSIGHT

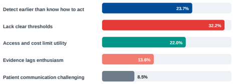
The deepest problem is not whether MRD can detect residual disease. It is whether a given level, change, timing, or trend should alter the care plan. Threshold uncertainty turns a technical result into a clinical dilemma.

WHY IT MATTERS

MRD reports should become more decision-oriented. Instead of leaving clinicians with a result alone, reporting systems and pathways should clarify what level of change is actionable, when repeat testing is appropriate, and where uncertainty remains.

Q8 - The uncomfortable reality of MRD use today

Threshold uncertainty is the leading discomfort.



08

SECTION 08

MRD pushes escalation, but most clinicians still reserve action for selected cases

42.4% say MRD pushes earlier or more aggressive intervention only in selected cases

CONTEXT

If MRD increases clinical sensitivity, the next question is whether it changes treatment timing. The response pattern suggests selective rather than broad escalation.

WHAT THE DATA SHOWS

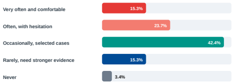
Very frequent and comfortable escalation is reported by 15.3% (9/59), while 23.7% say MRD often pushes earlier or aggressive intervention but with hesitation. The largest group, 42.4%, says this happens occasionally and only in selected cases.

THE INSIGHT

Clinicians are not passive in the face of MRD, but they are not universally aggressive either. The dominant behaviour is gated escalation: MRD can move treatment earlier, but usually only when the broader clinical picture supports the move.

Q9 - How often MRD pushes earlier or more aggressive intervention

Selective escalation is the dominant behaviour.



WHY IT MATTERS

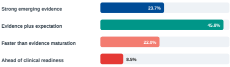
This pattern supports a tiered MRD action ladder: observe, repeat, intensify surveillance, escalate discussion, modify treatment. Without defined tiers, MRD may create inconsistent escalation across clinicians and institutions.

09

SECTION 09

MRD adoption is moving with evidence, but also with expectation

76.3% see adoption as mixed evidence-plus-expectation or ahead of evidence/readiness



Q10 - How clinicians view MRD adoption momentum

Adoption is seen as evidence-linked, but also expectation-driven.

CONTEXT

Momentum matters because it shapes how quickly a biomarker becomes embedded in pathways, guidelines, patient expectations, and payer decisions.

WHAT THE DATA SHOWS

Only 23.7% say MRD momentum is mostly driven by strong emerging evidence. The largest group, 45.8%, sees it as driven by a mix of evidence and clinical expectation. Another 22.0% say adoption is increasing faster than the evidence base is maturing, and 8.5% say it may be ahead of clinical readiness.

THE INSIGHT

Clinicians sense that MRD is being pulled forward by both science and aspiration. That does not make adoption inappropriate, but it does increase the need for disease-specific guardrails before enthusiasm becomes a substitute for evidence.

WHY IT MATTERS

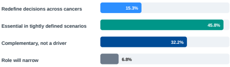
Educational content should avoid presenting MRD as a finished story. The credible message is more nuanced: MRD is a valuable and expanding tool, but its safest use depends on context, thresholds, and validated action pathways.

10

SECTION 10

The future role of MRD is essential, but bounded rather than universal

78.0% expect MRD to be essential in defined scenarios or complementary, not a universal driver



Q11 - MRD future role in oncology

Most expect MRD to be essential only in tightly defined scenarios or complementary.

CONTEXT

The final future-role question asks whether MRD will redefine oncology decision-making broadly, become essential in defined scenarios, remain complementary, or narrow as limitations become clearer.

WHAT THE DATA SHOWS

Only 15.3% expect MRD to redefine treatment decision-making across cancers. The leading response is that MRD will become essential only in tightly defined scenarios (45.8%). Another 32.2% expect it to remain complementary, and 6.8% believe its role will narrow.

THE INSIGHT

The future clinicians imagine is neither rejection nor full replacement of existing clinical judgment. It is a more disciplined MRD future, where the tool becomes indispensable in the right setting and supportive elsewhere.

WHY IT MATTERS

The best MRD strategy is selective precision. It should identify where MRD is ready to guide decisions, where it should support monitoring, and where evidence is still too immature for treatment change.

11

OPEN RESPONSE LENS

What clinicians say we would lose, and what we might avoid

The final open-ended question adds texture to the closed data. Clinicians repeatedly named the same trade-off: MRD gives earlier visibility and more precise monitoring, but it can also create anxiety, confusion, overtreatment, and false-positive concern when the action pathway is unclear.

> We would lose early detection of relapse and need for changing management.
>
> OPEN RESPONSE THEME · EARLY DETECTION

> We might avoid over treating when not indicated.
>
> OPEN RESPONSE THEME · OVERTREATMENT

> Patients may have less molecular anxiety.
>
> OPEN RESPONSE THEME · COMMUNICATION BURDEN

WHAT THE COMMENTS ADD

The open responses do not undermine MRD. They clarify the price of an unstructured MRD pathway. Clinicians value earlier relapse detection and objective response assessment, but they also see the risk of reacting to signals before clinical meaning is settled.

WHY IT MATTERS

Patient-facing MRD communication should separate detection from decision. A structured explanation can reduce anxiety: what was detected, how reliable it is, what it does and does not mean, what will be repeated, and what conditions would trigger action.

THE INSIGHT

MRD is becoming a communication challenge as much as a diagnostic one. The phrase molecular anxiety captures something important: the result may arrive before certainty, and both clinician and patient need language for that waiting space.

CAUTION

Open-ended comments are qualitative and should not be quantified as prevalence. Their value is interpretive: they explain why clinicians may remain cautious even when they believe MRD is useful.

PRACTICE LENSES

What this means at different clinical decision points

The same MRD result can carry different implications depending on disease setting, timing, patient context, and treatment consequence. The survey points to four practical lenses for oncology teams.

Hematologic malignancy pathways

Where MRD influence is strongest

MRD already has a stronger practice foothold in blood cancers, reflected by the 36.7% who identify hematologic malignancies as the main setting of influence.

Priority: sharpen thresholds and reporting consistency so existing use becomes less variable.

Surveillance and relapse detection

Where the signal feels most useful

Clinicians value MRD for early relapse detection and longitudinal monitoring, but this creates a time gap between molecular concern and conventional confirmation.

Priority: define repeat-test and follow-up intervals before a result forces premature escalation.

Escalation decisions

Where risk and action collide

MRD may push earlier or more aggressive intervention, but most clinicians reserve this for selected cases or act with hesitation.

Priority: build a tiered action ladder that protects against reflex escalation.

Patient communication

Where uncertainty becomes lived experience

Open responses show concern about anxiety, overtreatment, and false recurrence. MRD can create emotional burden before it creates treatment clarity.

Priority: equip clinicians with language that explains uncertainty without minimizing the signal.

FROM INSIGHT TO IMPACT

The data points to one central need: an MRD action framework.

Across the survey, clinicians repeatedly show a balanced position. They value MRD, but they do not want molecular sensitivity to outrun clinical meaning. They see earlier detection as a gain, but they also see the risks of unclear thresholds, inconsistent interpretation, access barriers, and overtreatment. A responsible MRD pathway should convert signal into staged interpretation, not automatic action.

1. **Define disease-specific thresholds**
   Clarify what level, direction, timing, and assay context makes a change clinically meaningful.

2. **Create a discordance pathway**
   Specify what to do when MRD and conventional findings do not align: repeat, monitor, image, discuss, or escalate.

3. **Separate detection from intervention**
   Help clinicians distinguish an early molecular signal from an immediate mandate to change treatment.

4. **Build patient-facing uncertainty language**
   Reduce molecular anxiety by explaining what MRD means, what remains unknown, and what the next clinical step is.

5. **Audit access and cost friction**
   Address the 22.0% who say cost and access limit true utility, especially where MRD could widen inequity.

6. **Keep the future bounded**
   Use MRD as essential in validated scenarios and complementary where evidence is still maturing.

This is the in-depth report.

It belongs to a healthcare community that turns clinical perspectives into structured insight. The value of MRD is not only in what it detects; it is in how thoughtfully oncology teams decide what the detection should change.

Real Opinions to Insights · Validated by Data

REFERENCES AND DATA SOURCE

1. MDForLives internal survey report: SGID 8813056, Engagement Campaign, Onco Survey 2. Completion rate 80.8%; total responses 73; complete responses 59; partial responses 14.
2. National Cancer Institute Dictionary of Cancer Terms. Minimal residual disease and MRD definitions.
3. U.S. Food and Drug Administration. Hematologic Malignancies: Regulatory Considerations for Use of Minimal Residual Disease in Development of Drug and Biological Products for Treatment. Guidance for Industry, January 2020.
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The Global Pulse of Healthcare

Real opinions to insights. Validated by data. This report synthesizes responses from oncology and hematology-oncology healthcare professionals across the United States, Italy, the United Kingdom, Canada, Germany, and France.

Methodology note: Findings reflect HCP opinion and reported practice patterns from an engagement survey. The report is intended for professional education and insight development. It is not clinical guidance, treatment advice, or a substitute for disease-specific protocols and local practice standards.

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