

In multiple myeloma,

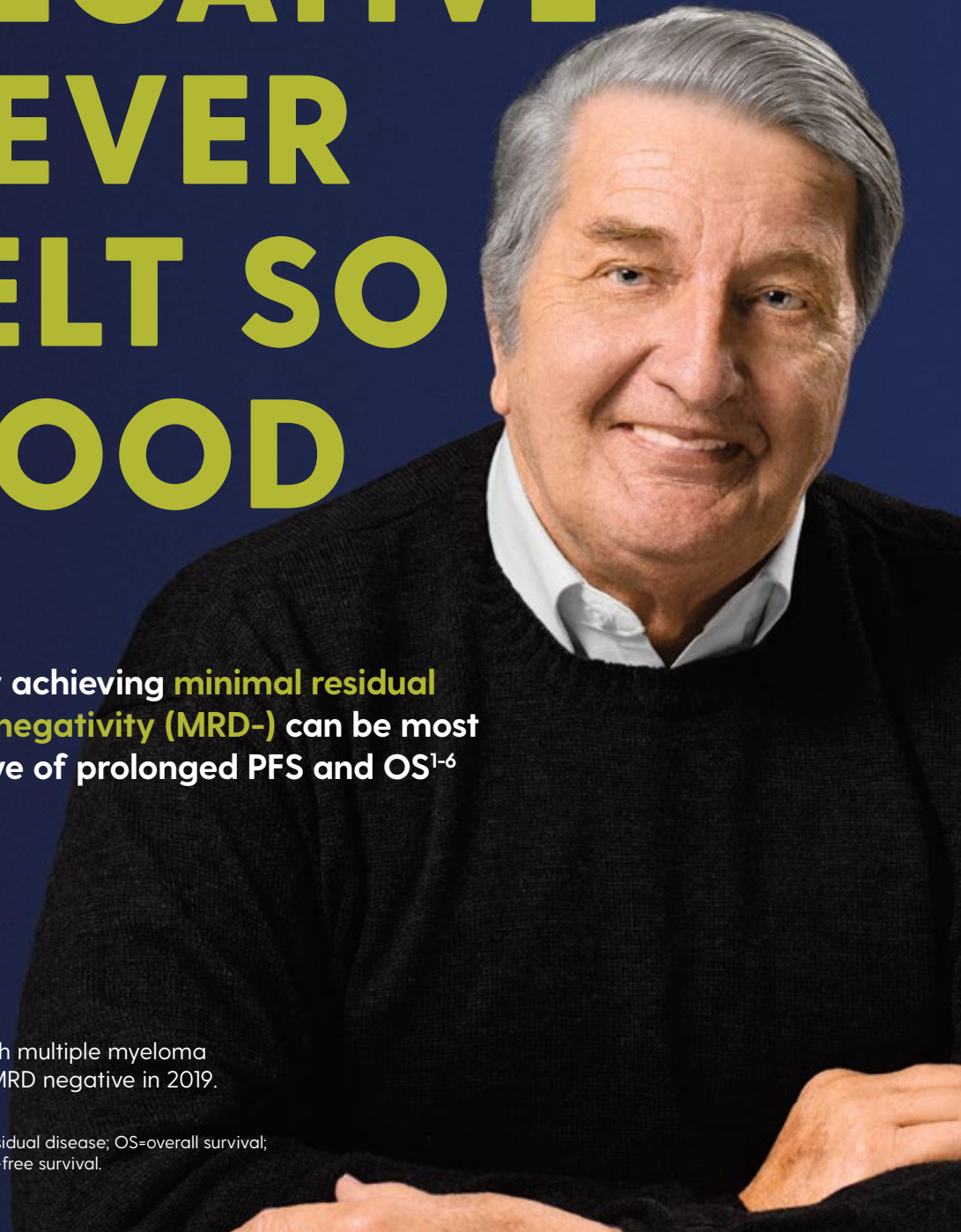
# NEGATIVE NEVER FELT SO GOOD

See why achieving **minimal residual disease negativity (MRD-)** can be most predictive of prolonged PFS and OS<sup>1-6</sup>

## Jim

A patient with multiple myeloma who tested MRD negative in 2019.

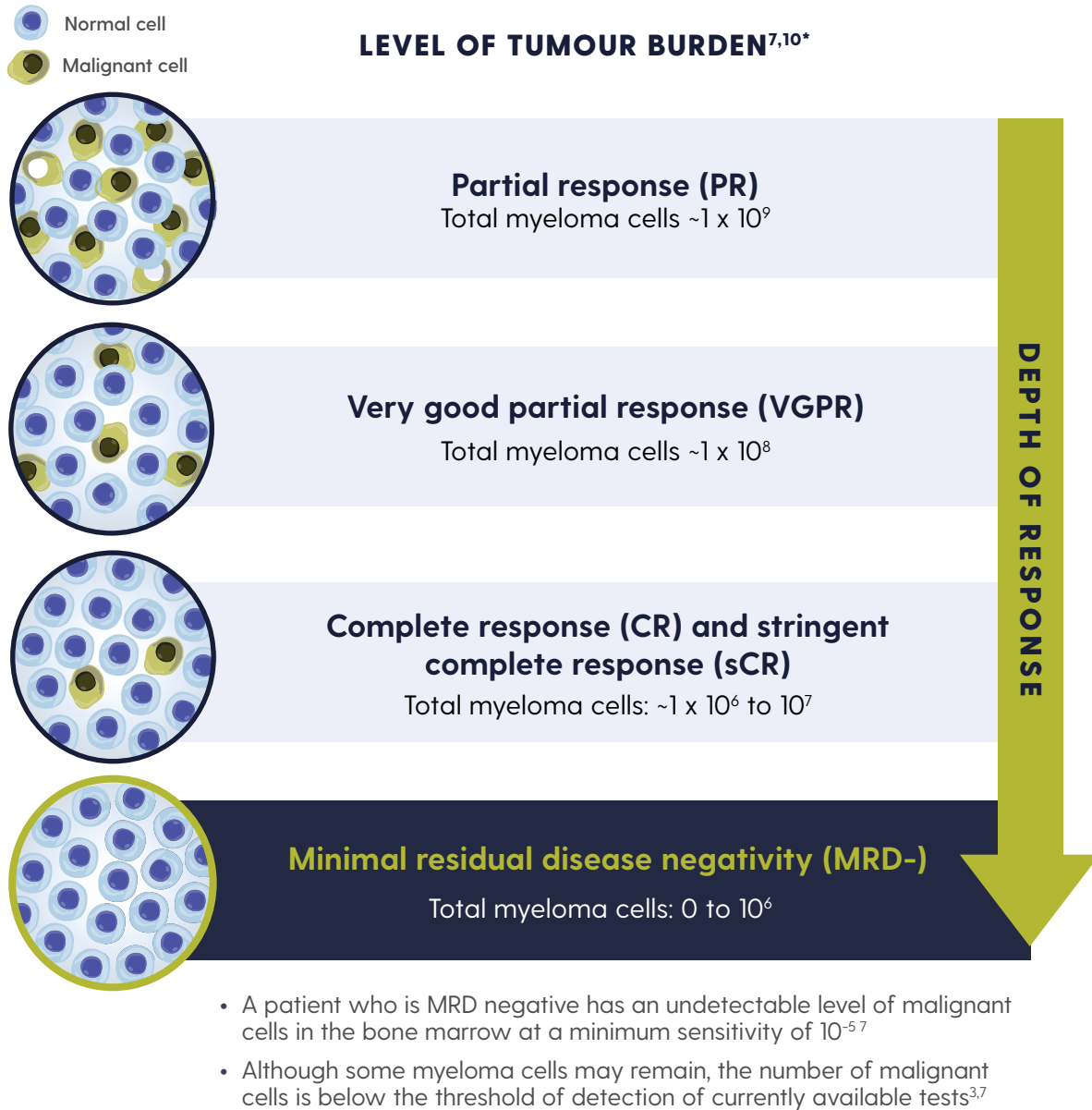
MRD=minimal residual disease; OS=overall survival; PFS=progression-free survival.



## TO MAXIMISE OUTCOMES, ACHIEVING A DEEP RESPONSE IS IMPERATIVE<sup>1</sup>

MRD- is the deepest level of treatment response in multiple myeloma<sup>7,8</sup>

As advances in treatment have led to deeper responses, increasingly sensitive techniques are needed to evaluate the persistence of malignant cells after therapy.<sup>12,9</sup>

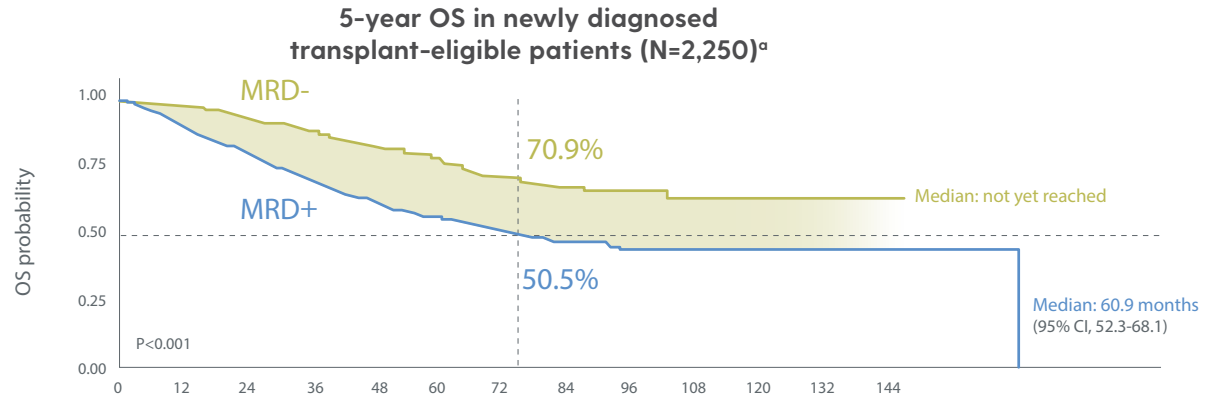


\*While standard response categories (PR, VGPR, and CR as noted in IMWG response criteria) are determined by measuring M-protein or free light chain levels in urine and blood samples, MRD status is determined by a direct measure of malignant cells in the bone marrow. IMWG criteria do not include tumour cell count when defining PR, VGPR, and CR.

CR=complete response; IMWG=International Myeloma Working Group; mPFS=median progression-free survival; MRD=minimal residual disease; MRD-=minimal residual disease negative/negativity; MRD+=minimal residual disease positive/positivity; NDMM=newly diagnosed multiple myeloma; OS=overall survival; PFS=progression-free survival.

## ACHIEVING MRD NEGATIVITY IS THE MOST POWERFUL INDICATOR OF PROLONGED PFS AND OS<sup>1-6</sup>

MRD- is associated with significantly improved survival<sup>3</sup>



Adapted from Munshi NC et al. *Blood Adv.* 2020.

MRD- is consistently associated with improved PFS and OS regardless of disease setting, method of MRD assessment, or sensitivity threshold.<sup>3</sup>

Even among patients who achieve CR, remaining MRD+ is associated with poorer prognosis<sup>4</sup>



Looking to treatments that achieve high rates of MRD negativity for patients is increasingly important to ensure better outcomes<sup>1,11</sup>

<sup>a</sup>Findings based on a large meta-analysis of 15 studies that reported OS rates in patients with transplant-eligible NDMM (N=2,250).<sup>3</sup>

<sup>b</sup>Findings based on a pooled analysis of 3 clinical trials that evaluated patients with transplant-eligible and -ineligible NDMM (N=609).<sup>4</sup>



# NEGATIVE NEVER FELT SO GOOD

**Jim**

A patient with multiple myeloma who tested MRD negative in 2019.

Treatments demonstrating high rates of MRD negativity can give more patients a chance for improved long-term outcomes<sup>1,11</sup>



Find out more about MRD negativity at [TransformMyeloma.com/minimal-residual-disease.html](https://TransformMyeloma.com/minimal-residual-disease.html)

**REFERENCES:** **1.** Kostopoulos IV, Ntanasis-Stathopoulos I, Gavriatopoulou M, Tsitsilonis OE, Terpos E. Minimal residual disease in multiple myeloma: current landscape and future applications with immunotherapeutic approaches. *Front Oncol.* 2020;10:860. **2.** Dimopoulos MA, Moreau P, Terpos E, et al. Multiple myeloma: EHA-ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol.* 2021;32(3):309-322. **3.** Munshi NC, Avet-Loiseau H, Anderson KC, et al. A large meta-analysis establishes the role of MRD negativity in long-term survival outcomes in patients with multiple myeloma. *Blood Adv.* 2020;4(23):5988-5999. **4.** Lahuerta J-J, Paiva B, Vidriales M-B, et al. Depth of response in multiple myeloma: a pooled analysis of three PETHEMA/GEM clinical trials. *J Clin Oncol.* 2017;35(25):2900-2910. **5.** Martinez-Lopez J, Wong SW, Shah N, et al. Clinical value of measurable residual disease testing for assessing depth, duration, and direction of response in multiple myeloma. *Blood Adv.* 2020;4(14):3295-3301. **6.** Goicoechea I, Puig N, Cedena M-T, et al. Deep MRD profiling defines outcome and unveils different modes of treatment resistance in standard- and high-risk myeloma. *Blood.* 2021;137(1):49-60. **7.** Kumar S, Paiva B, Anderson KC, et al. International Myeloma Working Group consensus criteria for response and minimal residual disease assessment in multiple myeloma. *Lancet Oncol.* 2016;17(8):e328-e346. **8.** Burgos L, Puig N, Cedena M-T, et al. Measurable residual disease in multiple myeloma: ready for clinical practice? *J Hematol Oncol.* 2020;13(1):82. **9.** Avet-Loiseau H, Ludwig H, Landgren O, et al. Minimal residual disease status as a surrogate endpoint for progression-free survival in newly diagnosed multiple myeloma studies: a meta-analysis. *Clin Lymphoma Myeloma Leuk.* 2020;20(1):e30-e37. **10.** Paiva B, van Dongen JJM, Orfao A. New criteria for response assessment: role of minimal residual disease in multiple myeloma. *Blood.* 2015;125(20):3059-3068. **11.** Landgren O, Iskander K. Modern multiple myeloma therapy: deep, sustained treatment response and good clinical outcomes. *J Intern Med.* 2017;281(4):365-382.

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