



## WHAT DO THESE RESULTS MEAN?

New guidelines from an international expert group (IMS/IMWG) help doctors categorize patients with multiple myeloma (MM) into standard-risk or high-risk groups based on abnormal genetic changes in the cancer cells. The high-risk group has a more difficult-to-treat form of cancer that is associated with shorter survival outcomes. In the PERSEUS/EMN017 study, Dara-VRd treatment kept the myeloma from getting worse for longer than VRd treatment in patients with newly diagnosed, genetically standard-risk and high-risk MM based on the new criteria, as well as the prior criteria

# New IMS/IMWG Risk Criteria by Next-Generation Sequencing: Analysis of Daratumumab Benefit in Both High- and Standard-Risk Patients in the PERSEUS/EMN017 Study

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## WHAT WERE THE RESULTS?

Overall, patients who received Dara-VRd had better outcomes: more patients had no detectable cancer cells and the disease stayed under control longer, which helped patients live longer without their MM getting worse regardless of whether they were in a standard-risk or high-risk group



## WHAT WAS THE PURPOSE OF THIS STUDY?

- Researchers wanted to see if adding daratumumab to the VRd treatment regimen improved outcomes for patients with newly diagnosed MM who could undergo a stem cell transplant
- This analysis looked at the benefit of adding daratumumab in patients with genetically standard-risk and high-risk MM

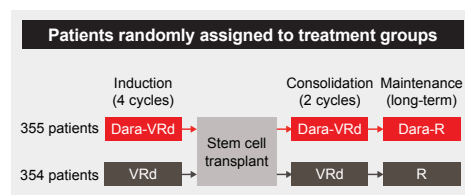


## WHO WAS IN THE STUDY AND HOW WAS IT CARRIED OUT?

- The PERSEUS/EMN017 study (NCT03710603) was conducted globally by randomly assigning 709 transplant-eligible patients with newly diagnosed MM to receive induction and consolidation therapy with bortezomib, lenalidomide, and dexamethasone with or without daratumumab (Dara-VRd or VRd) followed by maintenance therapy with lenalidomide with or without daratumumab (Dara-R or R)
- Bone marrow samples were collected at diagnosis for 664 patients, and it was possible to test the bone marrow of 434 patients for genetic changes using advanced tests like next-generation sequencing
- Using the new IMS/IMWG risk criteria (which includes additional factors that can impact risk of progression), patients with certain genetic changes were considered to have high-risk disease while those without these changes were considered to have standard-risk disease



Patients 18-70 years old who had a new diagnosis of MM and were considered able to undergo a stem cell transplant



Primary study assessment was the length of time until the return, growth, or spread of MM or the patient died

Figure 1: Reduced cancer cells (minimal residual disease negativity)

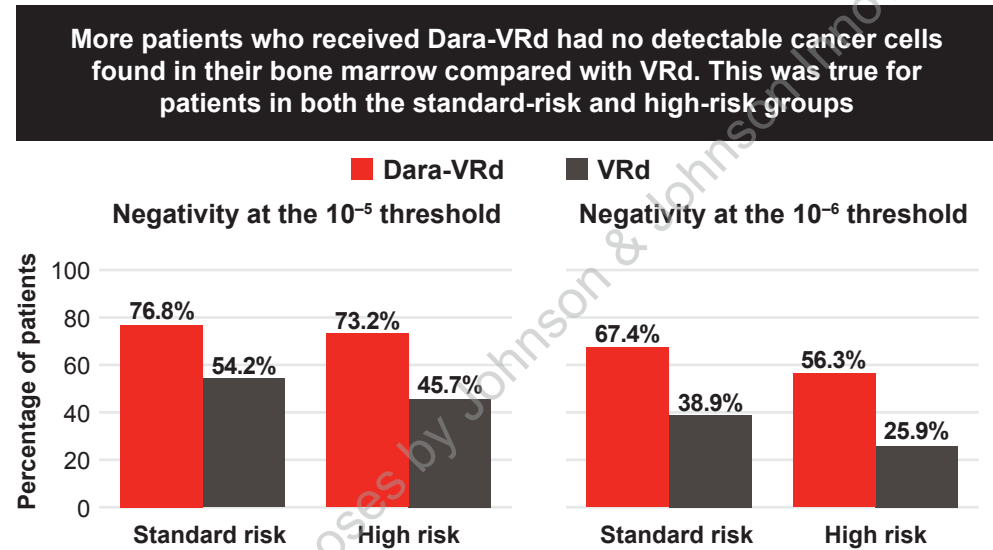


Figure 2: Continued control of MM over time (durable minimal residual disease negativity)

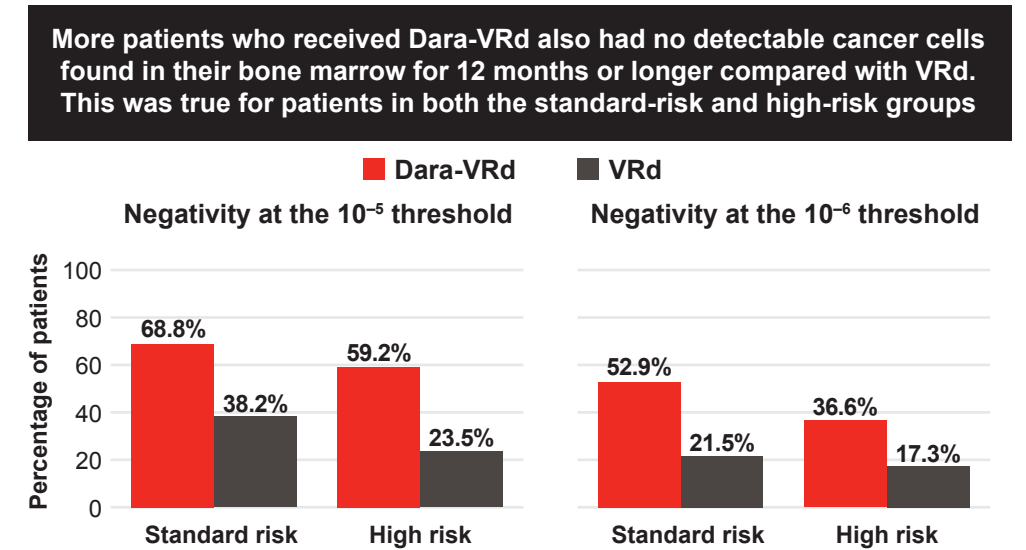
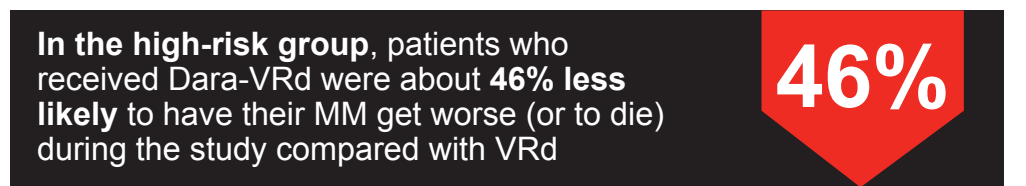
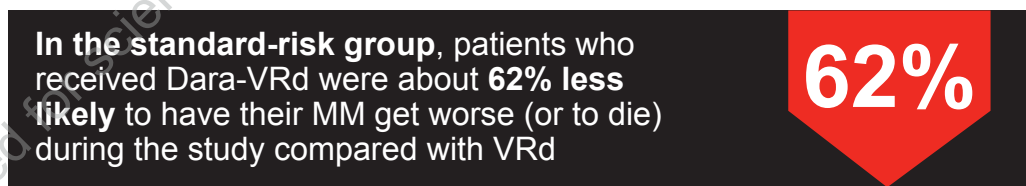


Figure 3: Time until MM got worse (progression-free survival)



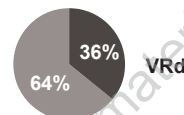
### Glossary of terms

<b>Consolidation therapy</b> Follow-up treatment to kill cancer cells left after earlier treatment and stem cell transplant	<b>Durable minimal residual disease negativity</b> No (less than 1) cancer cells found in the bone marrow at 2 consecutive tests for minimal residual disease that were at least 12 months apart, with no positive minimal residual disease test result in between. This is also sometimes referred to as "sustained minimal residual disease negativity"	<b>High-risk cytogenetics</b> Difficult-to-treat MM due to specific changes in genetic material that can impact normal cell functions. The current analysis looked at genetic changes as defined by the International Myeloma Society (IMS)/International Myeloma Working Group (IMWG) international expert group. High risk indicates that 1 or more of these genetic changes is present and is associated with a greater risk for worse disease outcomes	<b>Induction treatment</b> First treatment in a regimen, intended to reduce the number of cancer cells	<b>Maintenance therapy</b> Ongoing treatment to help prevent cancer from returning after it has disappeared following earlier treatment
<b>Minimal residual disease</b> After treatment, there is sometimes a small number of cancer cells still left in the patient's bone marrow that can be detected with very sensitive tests; these remaining cancer cells could potentially cause the disease to come back • Negativity at the 10 <sup>-5</sup> threshold: no (less than 1) cancer cells found in a sample of 100,000 healthy bone marrow cells • Negativity at the 10 <sup>-6</sup> threshold: no (less than 1) cancer cells found in a sample of 1 million healthy bone marrow cells	<b>Next-generation sequencing</b> A sensitive test to identify genetic changes in cancer cells	<b>Progression-free survival</b> Length of time since treatment started until the return, growth, or spread of the myeloma or the patient dies	<b>Stem cell transplant</b> In this procedure, a patient's own healthy stem cells are collected from their blood or bone marrow and stored safely; these cells can make all the different types of blood cells (such as white blood cells, red blood cells, and platelets). After the patient receives high-dose chemotherapy to kill as many remaining cancer cells as possible, the stored stem cells are returned to their body to help the bone marrow recover and start making healthy blood cells again	



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Dara-VRd 67% High risk 33% Standard risk



VRd 36%