

# Continuing Medical Education (CME) Questions

## Genetic susceptibility to MGUS

To obtain credit, you should first read the journal article. After reading the article, you should be able to answer the following, related, multiple-choice questions. To complete the questions (with a minimum 75% passing score) and earn continuing medical education (CME) credit, please go to <http://www.medscape.org/journal/blood>. Credit cannot be obtained for tests completed on paper, although you may use the worksheet below to keep a record of your answers. You must be a registered user on Medscape.org. If you are not registered on Medscape.org, please click on the “Register” link on the right hand side of the website. Only one answer is correct for each question. Once you successfully answer all post-test questions you will be able to view and/or print your certificate. For questions regarding the content of this activity, contact the accredited provider, CME@medscape.net. For technical assistance, contact CME@webmd.net. American Medical Association’s Physician’s Recognition Award (AMA PRA) credits are accepted in the US as evidence of participation in CME activities. For further information on this award, please refer to <http://www.ama-assn.org/ama/pub/category/2922.html>. The AMA has determined that physicians not licensed in the US who participate in this CME activity are eligible for *AMA PRA Category 1 Credits™*. Through agreements that the AMA has made with agencies in some countries, AMA PRA credit may be acceptable as evidence of participation in CME activities. If you are not licensed in the US, please complete the questions online, print the AMA PRA CME credit certificate, and present it to your national medical association for review.

**Weinhold N, Johnson DC, Rawstron AC, Försti A, Doughty C, Vijayakrishnan J, Broderick P, Dahir NB, Begum DB, Hosking FJ, Yong K, Walker BA, Hoffmann P, Mühleisen TW, Langer C, Dörner E, Jöckel K-H, Eisele L, Nöthen MM, Hose D, Davies FE, Goldschmidt H, Morgan GJ, Hemminki K, Houlston RS. Inherited genetic susceptibility to monoclonal gammopathy of unknown significance. *Blood*. 2014;123(16):2513-2517.**

**1. Your patient is a 72-year-old man with monoclonal gammopathy of unknown significance (MGUS). According to the report of 2 case-control series by Dr Weinhold and colleagues, which of the following statements about the effect of inherited genetic variation on the risk for development of multiple myeloma (MM) is correct?**

- Relatives of persons with MGUS are not at increased risk for MM
- MGUS appears to be a marker of inherited genetic susceptibility to MM
- In this study, single-nucleotide polymorphism (SNP) associations with the risk for MGUS were not independent
- Persons with 4 risk alleles would not be at greater risk for development of MGUS than persons with 2 risk alleles

**2. According to the 2 case-control series analyzed by Dr Weinhold and colleagues, which of the following statements about loci associated with an increased risk for development of MGUS is correct?**

- 2p23.3 is not associated with an increased risk for development of MGUS
- The rs1052501 SNP did not independently affect MGUS risk
- The effect of the rs2285803 SNP on MGUS risk was not statistically significant
- Loci identified that increased the risk for development of MGUS included 3p22.1, 3q26.2, and 6p21.33

**3. According to the report of 2 case-control series by Dr Weinhold and colleagues, which of the following statements about how the observed changes in SNPs may play a role in MM development would *most likely* be correct?**

- rs1052501 maps to the gene encoding TNFRSF13B
- TNFRSF13B is important in regulating normal B-cell homeostasis and determining circulating immunoglobulin G levels
- rs4273077 results in an amino acid change responsible for A542T in ULK4, a key regulator of mammalian target of rapamycin-mediated autophagy
- Several other risk SNPs examined in this study result in amino acid changes and clearly play a directly causal role

### Activity Evaluation (where 1 is strongly disagree and 5 is strongly agree)

1. The activity supported the learning objectives.
 

1	2	3	4	5
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2. The material was organized clearly for learning to occur.
 

1	2	3	4	5
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3. The content learned from this activity will impact my practice.
 

1	2	3	4	5
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4. The activity was presented objectively and free of commercial bias.
 

1	2	3	4	5
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