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Continuing Medical Education (CME) Questions

CH in patients with ischemic stroke

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Arends CM, Liman TG, Strzelecka PM, Kufner A, Löwe P, Huo S, Stein CM, Piper SK, Tilgner M, Sperber PS, Dimitriou S, Heuschmann PU, Hablesreiter R, Harms C, Bullinger L, Weber JE, Endres M, Damm F. Associations of clonal hematopoiesis with recurrent vascular events and death in patients with incident ischemic stroke. *Blood*. 2023;141(7):787-799.

1. **Your patient is a 73-year-old man with clonal hematopoiesis (CH) and first ischemic stroke. On the basis of the analysis by Arends and colleagues of CH in peripheral blood DNA from 581 patients with first-ever ischemic stroke from PROSCIS-B, which one of the following statements about the association of CH with large artery atherosclerosis, white matter lesion (WML) load, and proinflammatory profile in patients with ischemic stroke is correct?**
   - ☐ The highest prevalence of CH was in patients with small vessel disease
   - ☐ Patients with CH had higher median values of the inflammatory markers high-sensitivity C-reactive protein, interleukin 6, and vascular 1 cell adhesion molecule 1 than patients without CH
   - ☐ WML load was not significantly different between CH^+ and CH^- patients
   - ☐ Hemoglobin, red blood cell counts, and estimated glomerular filtration rate did not differ significantly between CH^+ and CH^- patients

2. **According to the analysis by Arends and colleagues of CH in peripheral blood DNA from 581 patients with first-ever ischemic stroke from PROSCIS-B, which one of the following statements about CH clone dynamics and mutations associated with higher risk for second vascular events and death after ischemic stroke is correct?**
   - ☐ Mutations in *TET2* and *PPM1D* were associated with higher risk for second vascular events and death after ischemic stroke
   - ☐ CH^+ vs CH^- patients had a 12% higher risk for the primary composite endpoint (CEP)
   - ☐ CH clone size did not affect risk for second vascular events and death after ischemic stroke
   - ☐ Germline variants of the IL-6 receptor had no effect on modulating risk associated with CH clones

3. **According to the analysis by Arends and colleagues of CH in peripheral blood DNA from 581 patients with first-ever ischemic stroke from PROSCIS-B, which one of the following statements about clinical implications of the interplay of CH, systemic inflammation, and cardiovascular risk is correct?**
   - ☐ The findings are not likely to assist in developing secondary prevention strategies for patients with ischemic stroke
   - ☐ The findings suggest that preventive precision medicine approaches should target clonal expansion, not inflammation
   - ☐ Increased risk for the CEP in CH-positive patients was mostly driven by myocardial infarctions
   - ☐ Several arguments favor an age-independent biologic effect of CH on secondary vascular risk and mortality

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