

practice-based research networks.<sup>2</sup> Card studies are, by definition, brief and limited in scope.<sup>2</sup> Our study was developed and conducted using participatory methods.<sup>3</sup> Thus, the method of administration and selected list of variables were chosen by the participating primary care practice champions to maximize simplicity during administration and minimize impact on clinical workflow. Finally, we considered excluding overweight and nearly overweight adults from our response sample, but sensitivity analysis without their responses found no changes in our primary outcomes; thus we chose to leave them in the sample.

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## References

1. Cole AM, Keppel GA, Andrilla HA, Cox CM, Baldwin LM. Primary care patients' willingness to participate in comprehensive weight loss programs: from the WWAMI Region Practice and Research Network. *J Am Board Fam Med* 2016;29:572–80.
2. Westfall JM, Zittleman L, Staton EW, et al. Card studies for observational research in practice. *Ann Fam Med* 2011;9:63–8.
3. Cole A, Keppel GA, Linares A, et al. Evaluating the development, implementation and dissemination of a multisite card study in the WWAMI Region Practice and Research Network. *Clin Transl Sci* 2015;8:764–9.

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## Re: Presenting Signs of Multiple Myeloma and the Effect of Diagnostic Delay on the Prognosis

*To the Editor:* The article by Goldschmidt et al<sup>1</sup> addresses an important issue of the impact of early diagnosis in the outcome of patients with multiple myeloma. The authors mention that some have advocated use of serum-free light-chain assay (SFLCA) for “screening.” SFLCA has been promoted for diagnosing, determining the prognosis, and monitoring of monoclonal gammopathies.<sup>2</sup> However, empirical evidence suggests a far more limited role for SFLCA. Serum protein electrophoresis and serum immunofixation electrophoresis are the gold standards for diagnosis;<sup>3</sup> these two alone are sufficient to diagnose about 95% cases. Patients with light-chain gammopathy can be detected by urine protein electrophoresis and urine immunofixation electrophoresis. Among patients without monoclonal gammopathy, the  $\kappa$ -to- $\lambda$  ratio is abnormal in >35%, and the false-positive rate is about 55% in patients with polyclonal hypergammaglobulinemia.<sup>4</sup> In monoclonal gammopathy there is an overall 27% false-negative  $\kappa$ -to- $\lambda$  ratio. The false-negative rate is up to 67% for patients with monoclonal gammopathy of undeter-

mined significance.<sup>5</sup> SFLCA and  $\kappa$ -to- $\lambda$  ratio have virtually no role in the diagnosis of monoclonal gammopathy, as an abnormal  $\kappa$ -to- $\lambda$  ratio is not diagnostic of monoclonal gammopathy and a normal  $\kappa$ -to- $\lambda$  ratio does not exclude monoclonal gammopathy.<sup>6</sup>

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## References

1. Goldschmidt N, Zamir L, Poperno A, Kahan NR, Paltiel O. Presenting signs of multiple myeloma and the effect of diagnostic delay on the prognosis. *J Am Board Fam Med* 2016;29:702–9.
2. Bradwell A. Serum free light chain analysis plus Hevlylite. 7th ed. Birmingham, UK: Binding Site Group Ltd; 2015.
3. Rajkumar SV, Dimopoulos MA, Palumbo A, et al. International Myeloma Working Group updated criteria for the diagnosis of multiple myeloma. *Lancet Oncol* 2014;15:e538–48.
4. Singh G. Serum free light chain assay and  $\kappa/\lambda$  ratio performance in patients without monoclonal gammopathies: high false-positive rate. *Am J Clin Pathol* 2016;146:207–14.
5. Kyle RA, Buadi F, Rajkumar SV. Management of monoclonal gammopathy of undetermined significance (MGUS) and smoldering multiple myeloma (SMM). *Oncology (Williston Park)* 2011;25:578–86.
6. Singh G. Serum free light chain assay and  $\kappa/\lambda$  ratio: performance in patients with monoclonal gammopathy-high false negative rate for  $\kappa/\lambda$  ratio. *J Clin Med Res* 2017;9:46–57.

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The above letter was referred to the author of the article in question, who offers the following reply.

## Response: Re: Presenting Signs of Multiple Myeloma and the Effect of Diagnostic Delay on the Prognosis

*To the Editor:* We thank Dr. Gurmukh Singh for his response. We are not advocating screening for multiple myeloma using a serum-free light-chain assay, and we agree with Dr. Gurmukh Singh that no evidence exists for the efficacy of serum-free light-chain testing in asymptomatic individuals. However, we suggest that this might be a worthwhile diagnostic test for patients with unexplained back pain and other “red flag” signs or symptoms, in whom multiple myeloma is suspected.

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