

## Cells to Surgery Quiz: October 2015

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*Journal of Investigative Dermatology* (2015) **135**, e18. doi:10.1038/jid.2015.310

Questions relate to the image as well as to selected articles in *JID*, which are listed after the questions. Answers will be posted as supplementary material. We hope you enjoy this challenge.

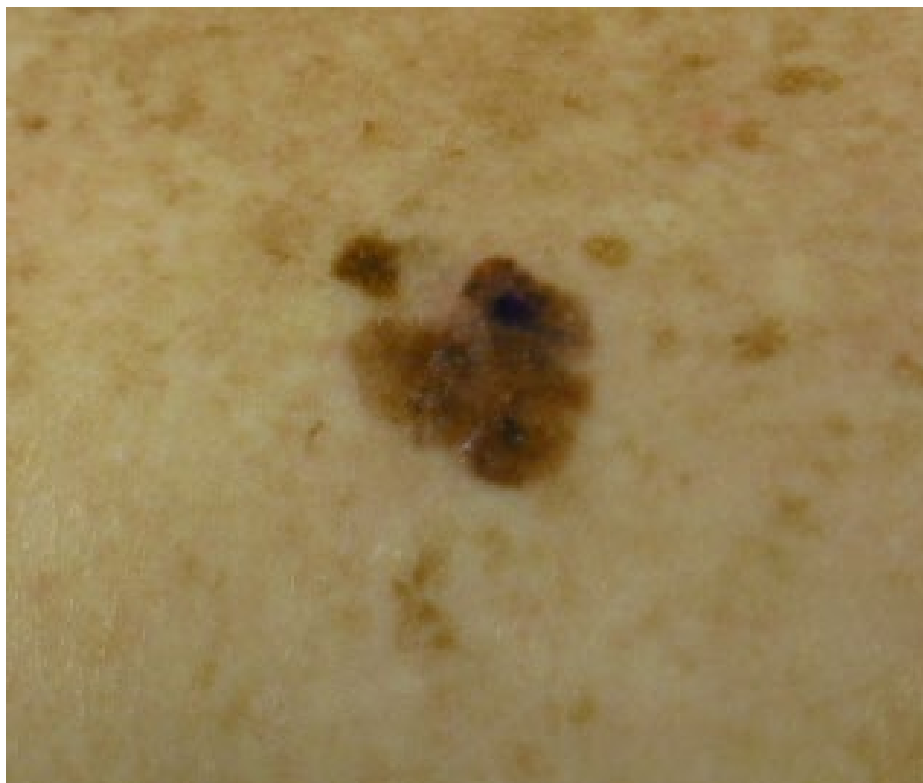


Image courtesy of Kavitha Reddy, Department of Dermatology, Boston University.

### QUESTIONS

1. A patient presents to the clinic with the lesion pictured above. A somatic mutation in which of the following gene products is most commonly seen in this disease?
  - a. BRAF.
  - b. NF1.
  - c. NRAS.
  - d. CDKN2A.

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2. Excisional biopsy confirms the diagnosis of melanoma. The lesion is reported to be 0.8 mm in thickness. Which of the following is the correct intervention?
- Electrodesiccation and curettage.
  - Vemurafenib.
  - Wide excision with 1 cm margins.
  - Wide excision with 2 cm margins.
  - Wide excision with 2 cm margins + sentinel lymph node biopsy.
3. In previous studies, molecular analysis of BRAF-positive melanomas revealed heterogeneous expression of BRAF<sup>V600</sup>. Riveiro-Falkenbach *et al.* analyzed BRAF-positive melanomas to assess homogeneous and heterogeneous expression of BRAF<sup>V600</sup>. According to this study, what is the most likely explanation for this heterogeneity?
- Only a portion of the melanoma expresses the BRAF<sup>V600</sup> mutation.
  - Technical errors in processing the sample.
  - The patient had two distinct melanomas, one positive for the BRAF<sup>V600</sup> mutation and one negative.
  - None of the above.

### TOPIC ARTICLE

The questions refer to the following article:

Riveiro-Falkenbach E, Villanueva CA, Garrido MC *et al.* (2015) Intra- and inter-tumoral homogeneity of BRAF<sup>V600E</sup> mutations in melanoma tumors. *J Invest Dermatol*; e-pub ahead of print 16 July 2015

Answers are available as supplementary material at <http://dx.doi.org/10.1038/jid.2015.310>.