A 57-year-old man, treated 3 years earlier with chemotherapy and autologous bone marrow transplant for immunoglobulin A/A multiple myeloma, presented with right facial numbness, left lower extremity numbness, and a palpable right preauricular mass. Brain magnetic resonance imaging demonstrated multiple foci of intraparenchymal enhancements with possible leptomeningeal involvement, numerous bone metastases, and a mass superior to the right parotid gland.

Cerebrospinal fluid slides were stained by a modified Romanowsky stain (panel A) and Papanicolaou stain (for cytology; panels Bi-ii) and revealed numerous anaplastic plasma cells characterized by abundant deeply basophilic cytoplasm, marked nuclear contour irregularity, and prominent nucleoli. Some cells contained variably sized, spherical cytoplasmic inclusions (Russell bodies), which appeared light blue using Romanowsky stain (panel A). Interestingly, the Russell bodies appeared orange when Papanicolaou stain was used (panels Bi-ii), which to our knowledge has not been reported previously. Flow cytometric analysis of cerebrospinal fluid demonstrated monoclonal plasma cells with an immunophenotype of CD45(+) , CD38(+) , cytoplasmic λ(+), CD19(−), CD20(−), and CD56(−). The patient died 3 months later.
Orange-colored Russell bodies by Papanicolaou stain

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