Based on our experience, there are likely opportunities for improved management of the blood supply within transfusion services nationally. For example, when faced with an impending limited supply from our blood provider, we recognized the opportunity to review long-standing institutional par levels for red cell components. Our transfusion service, in conjunction with our primary blood supplier, began working with an Internet-based inventory management system (BloodHub, Phoenix, Arizona; www.BloodHub.com, accessed January 23, 2018) in early September 2017. This program provides real-time access to critical inventory information (between the donor center and the transfusion service customer) with a goal of tightening our inventory. It is still too early to tell if this program has allowed us to reduce the amount of blood products that we carry in our blood bank, but that is the goal.

Additionally, examination of utilization practice of vulnerable components such as ONEG RBCs, AB plasma, and apheresis platelets may be called for. As we found, a close look at the distribution of ONEG RBCs revealed a surprising number of ONEG red cells issued to (1) non–Rh-negative and (2) non–group O recipients. Two recent publications suggest that this endeavor may be informative. A recent multicenter 12-year retrospective review showed an alarming increase in blood group O RBCs being transfused to non–O recipients, from 7.8% to 11.1%. Investigators from Australia recently published the findings of a similar retrospective audit of 5 weeks of data on the fate of all ONEG RBCs transfused in their country. Of the information collected (6387 units transfused), only 47% of ONEG RBC was transfused to group ONEG patients. The volunteer nature of the US blood donor system, while absolutely necessary for a safe supply, contributes to a certain amount of unpredictability of the availability of blood products. It is our hope that the algorithm described above offers a helpful tool to assist institutions in management of blood shortages during times when demand exceeds supply, whether locally, regionally, or nationally.

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Letters to the Editor

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Meningothelial-like Nodules of the Lung Show SSTR2a Immunohistochemical Staining

To the Editor.—Meningothelial-like nodules (MLNs), also known as minute pulmonary MLNs, are a common incidental finding in pulmonary wedge biopsies, lobectomies, and autopsies, present in 13.8% to 48% of cases. The underlying pathogenesis is unclear, but most authors agree that this finding is reactive and related to the presence of chronic lung disease, although there are no specific, consistent primary lung diseases known to be associated with MLNs. Some studies have suggested that a minority of MLNs may be clonal processes with shared genetic alterations with meningioma, including the characteristic loss of NF2. Their absence in children and increased frequency in older adults and those with long-standing chronic lung diseases seem to suggest that they are an acquired entity, instead of a congenital rest of meningothelial cells.1,2

Besides having a similar histologic appearance to meningiomas found in the central nervous system (CNS),

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MLNs share similar ultrastructural characteristics and immunohistochemical findings with meningiomas. Electron microscopy studies demonstrate desmosomes connecting the cells and the presence of frequent interdigitating cell processes. Both meningiomas and MLNs have been shown by immunohistochemistry to be positive for vimentin, epithelial membrane antigen (EMA), progesterone receptor (PR), and CD56.1-3

Recently, it has been recognized that meningiomas have upregulated somatostatin receptor 2a (SSTR2a).4 Studies have demonstrated that SSTR2a is a more sensitive and specific marker for the diagnosis of primary CNS meningiomas than either EMA or PR. One study showed SSTR2a staining in all meningiomas examined (n = 176) with 88% specificity, 100% sensitivity, 94% positive predictive value, and 100% negative predictive value for identifying meningiomas, and showed that SSTR2a could be used to correctly diagnose meningioma in cases with negative EMA or PR immunohistochemical staining. The specificity of SSTR2a is also increased when it is combined with EMA or PR. In addition, SSTR2a was shown to accurately discriminate between meningioma and cases of primary lung adenocarcinoma as well as melanoma and carcinoma metastatic to the CNS.5

Here, we show that SSTR2a can also be used to identify MLNs. We identified 5 cases from lung explants for various nonneoplastic primary lung diseases with at least one incidentally discovered MLN (Figure, A). All 5 of these cases showed strong and diffuse immunohistochemical staining localized to MLNs for both EMA (Figure, B) and SSTR2a (Figure, C). This finding adds more evidence to previous studies suggesting that there is a common lineage among meningotheelial cells, meningiomas, and MLNs, and offers an additional immunohistochemical stain to identify this incidental finding.

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