Encountering uncommon anatomic variants with donor heart procurement is more common than we think. Barac and colleagues describe important technical features when procuring a donor heart with a persistent left superior vena cava (SVC). The 3 main lessons to be learned from this article are as follows: (1) A thorough inspection of the thoracic cavity must be performed after sternotomy. At the superior aspect of the pericardium, one must identify the innominate vein. If the innominate vein appears small or is absent, then one must suspect a persistent left SVC. (2) On identification of the persistent left SVC, do not ligate the left SVC until after the preservation solution has been delivered. (3) On identification of the left SVC, one must inspect the coronary sinus in the right atrium. If there is an absent or small opening, the coronary sinus must be unroofed.

I would also comment that finding a persistent left SVC as an isolated finding should not trigger an automatic rejection/discard of the donor heart. The anomalies that are commonly associated with a persistent left SVC typically can be surgically addressed. These anomalies include an unroofed coronary sinus or an atrial septal defect. In our center, we would choose to close the atrial septal defect or unroof the coronary sinus and use a donor heart with a persistent left SVC if it has acceptable function. Given the relative scarcity of donor hearts, thoracic transplant surgeons must use every available heart, including hearts with anomalies such as persistent left SVC.

Reference