- mally found spleen: an erroneous concept. *Am J Cardiol* 1990;60:1504-6.
6. Macartney FJ, Zuberbuhler JR, Anderson RH. Morphological considerations pertaining to recognition of atrial isomerism: consequences for sequential chamber localisation. *Br Heart J* 1980;44:657-67.
 7. DeTommasi SM, Daliento L, Ho SY, Macartney FJ, Anderson RH. Analysis of atrioventricular junction, ventricular mass and ventriculoarterial junction in 43 specimens with atrial isomerism. *Br Heart J* 1981;45:236-47.
 8. Sapire DW, Ho SY, Anderson RH, Rigby ML. Diagnosis and significance of atrial isomerism. *Am J Cardiol* 1986;58:342-6.
 9. Sharma S, Devine W, Anderson RH, Zuberbuhler JR. The determination of atrial arrangement by examination of appendage morphology in 1842 heart specimens. *Br Heart J* 1988;60:227-31.
 10. Uemura H, Ho SY, Anderson RH, et al. The surgical anatomy of coronary venous return in hearts with isomeric atrial appendages. *J Thorac Cardiovasc Surg* 1995;110:436-44.
 11. Van Praagh S, Carrera ME, Sanders S, Mayer JE, Van Praagh R. Partial or total direct pulmonary venous drainage to right atrium due to malposition of septum primum: anatomic and echocardiographic findings and surgical treatment—a study based on 36 cases. *Chest* 1995;107:1488-98.
 12. Melhuish BPP, Van Praagh R. Juxtaposition of the atrial appendages, a sign of severe cyanotic congenital heart disease. *Br Heart J* 1968;30:269-84.
 13. Van Praagh S, Truman T, Firpo A, et al. Cardiac malformations in trisomy-18: a study of 41 postmortem cases. *J Am Coll Cardiol* 1989;13:1586-97.
 14. Brown DL, Emerson DS, Shulman LP, Doubilet PM, Felker RE, Van Praagh S. Predicting aneuploidy in fetuses with cardiac anomalies: significance of visceral situs and noncardiac anomalies. *J Ultrasound Med* 1993;3:153-61.

12/8/71009

Systemic and venous connection in asplenia syndrome

To the Editor:

We read with interest the stimulating and useful paper of Rubino and associates¹ on systemic and venous connection in asplenia syndrome.

Even in our angiocardigraphic series we² noted the correlation between atresia of the pulmonary valve and obstruction of the pulmonary venous connection. Moreover, we³ reported the prevalence of bilateral ductus arteriosus in this subgroup of patients.

The study of Rubino and colleagues¹ demonstrates the great variability in the site and mode of connection of the pulmonary and systemic veins in this syndrome. To underline this concept, we would like to report the unique features observed in a patient from our angiographic series,² which were confirmed at autopsy.

This patient had visceral heterotaxy with asplenia, levocardia, single atrium, complete atrioventricular canal with right ventricular dominance, L-ventricular loop, L-transposition of the great arteries, and pulmonary atresia. Absence of the inferior vena cava with azygos continua-

tion into the unilateral right superior vena cava was noted. In addition, total anomalous pulmonary venous connection into the azygos vein was present, so that the entire systemic and pulmonary venous drainages (except the suprahepatic and coronary veins) reached the heart by the unilateral superior vena cava.

An accurate preoperative assessment of systemic and pulmonary connections is essential for the surgical treatment of patients with asplenia syndrome. Despite the progresses of echocardiography, we believe that angiocardigraphic study is still mandatory in these children.

Bruno Marino, MD
Luciano Pasquini, MD
Pediatric Cardiology
Bambino Gesù Hospital
Piazza Sant'Onofrio, 4
00165 Rome, Italy

REFERENCES

1. Rubino M, Van Praagh S, Kadoba K, Pessotto R, Van Praagh R. Systemic and pulmonary venous connections in visceral heterotaxy with asplenia. *J Thorac Cardiovasc Surg* 1995;110:641-50.
2. Vairo U, Marino B, Parretti di Iulio D, et al. Isomerismo atriale destro con atresia polmonare: caratteristiche angiocardigrafiche e modelli di circolazione polmonare. *G Ital Cardiol* 1991;21:669-74.
3. Formigari R, Vairo U, de Zorzi A, Santoro G, Marino B. Prevalence of bilateral patent ductus arteriosus in patients with pulmonic valve atresia and asplenia syndrome. *Am J Cardiol* 1992;70:1219-20.

12/8/71602

Does video-assisted thoracic surgery disseminate tumor?

To the Editor:

In response to the brief communication by Dr. Buhr and colleagues on tumor dissemination after thoracoscopic resection for lung cancer (*J Thorac Cardiovasc Surg* 1995;110:855-6), several comments seem appropriate.

Video-assisted thoracic surgery (VATS) and traditional thoracoscopy are two different and separate operative techniques.¹ Using the terms interchangeably is confusing.

Contrary to traditional thoracoscopy being "rarely used" for cancer, in our experience it was being used frequently for cancer more than 25 years ago.² Currently, we have used VATS for more than 600 hundred patients with cancer. This series includes more than 100 lobectomies during a 5-year period.

In case 1 of the article by Buhr and associates, if a 1.5 cm lesion was cleanly "wedged" by stapling with sufficient margins sealed by staples, are the authors suggesting that the tumor cells in the pleural lavage resulted from that procedure? Maybe this tumor was already hematogenously disseminating and found reparative tissue with angiogenesis in the port site. Also, 1 year of observation is not long enough to rule out widespread metastases. Multiple metastases may become evident with more time.