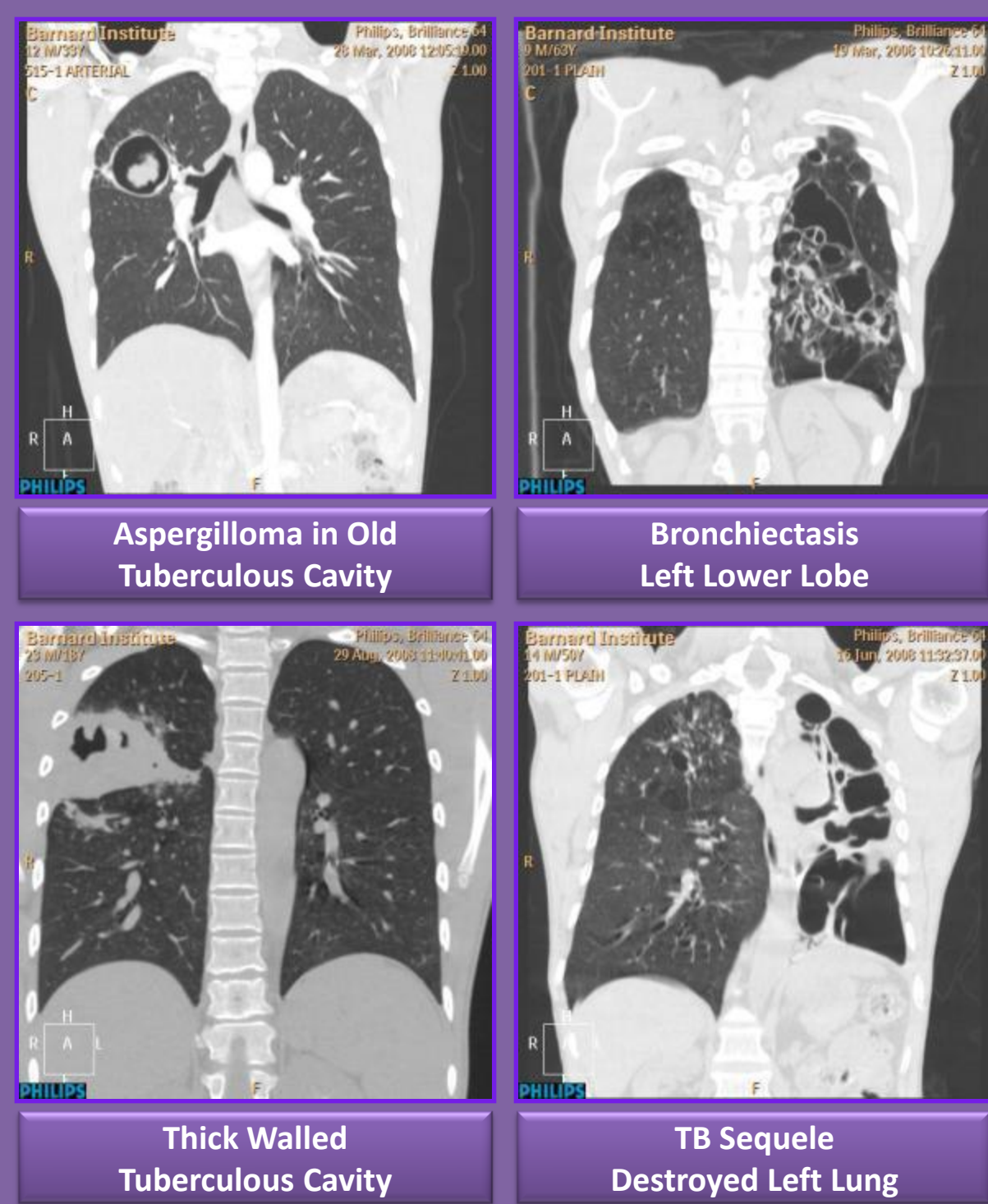
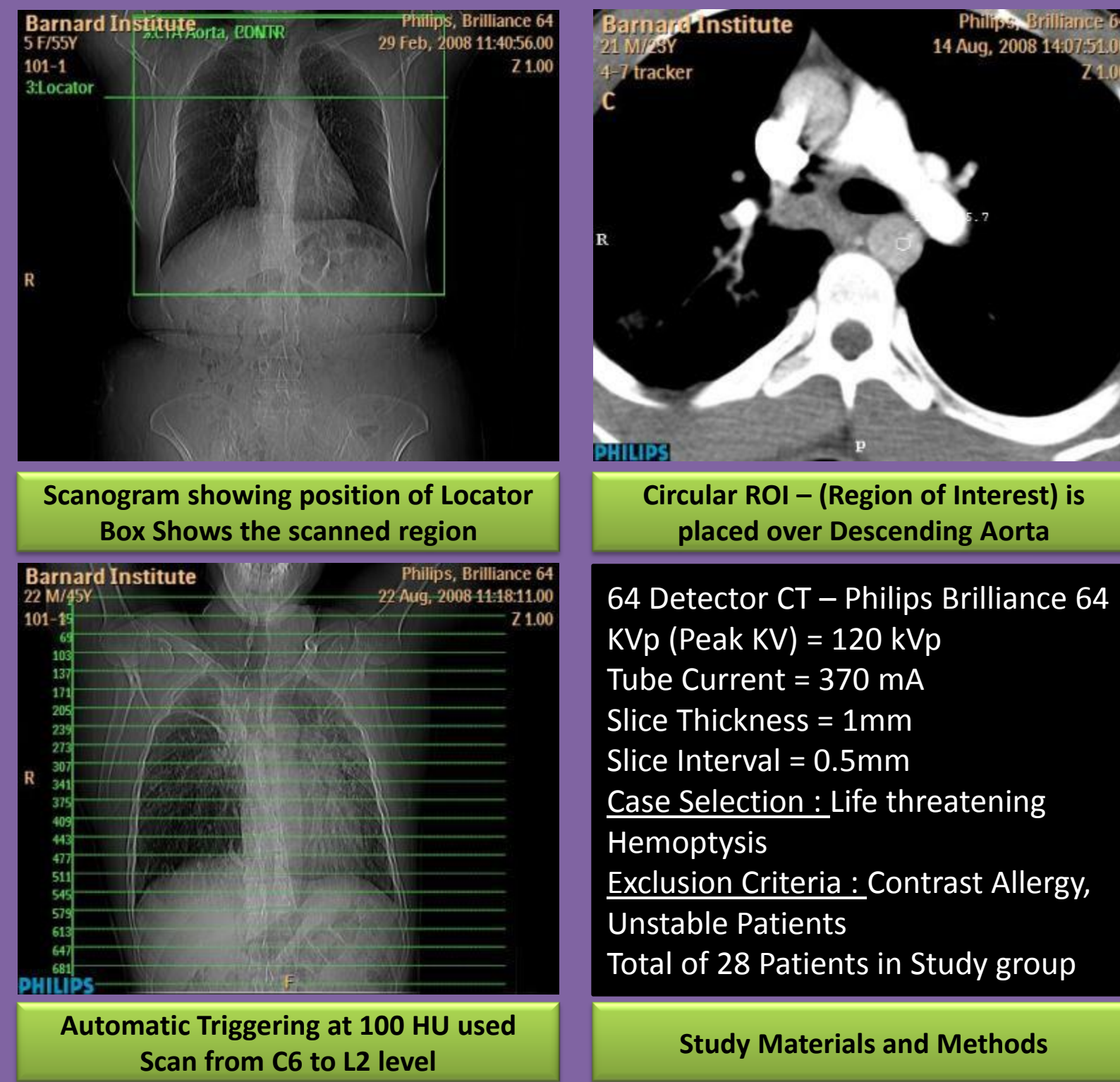


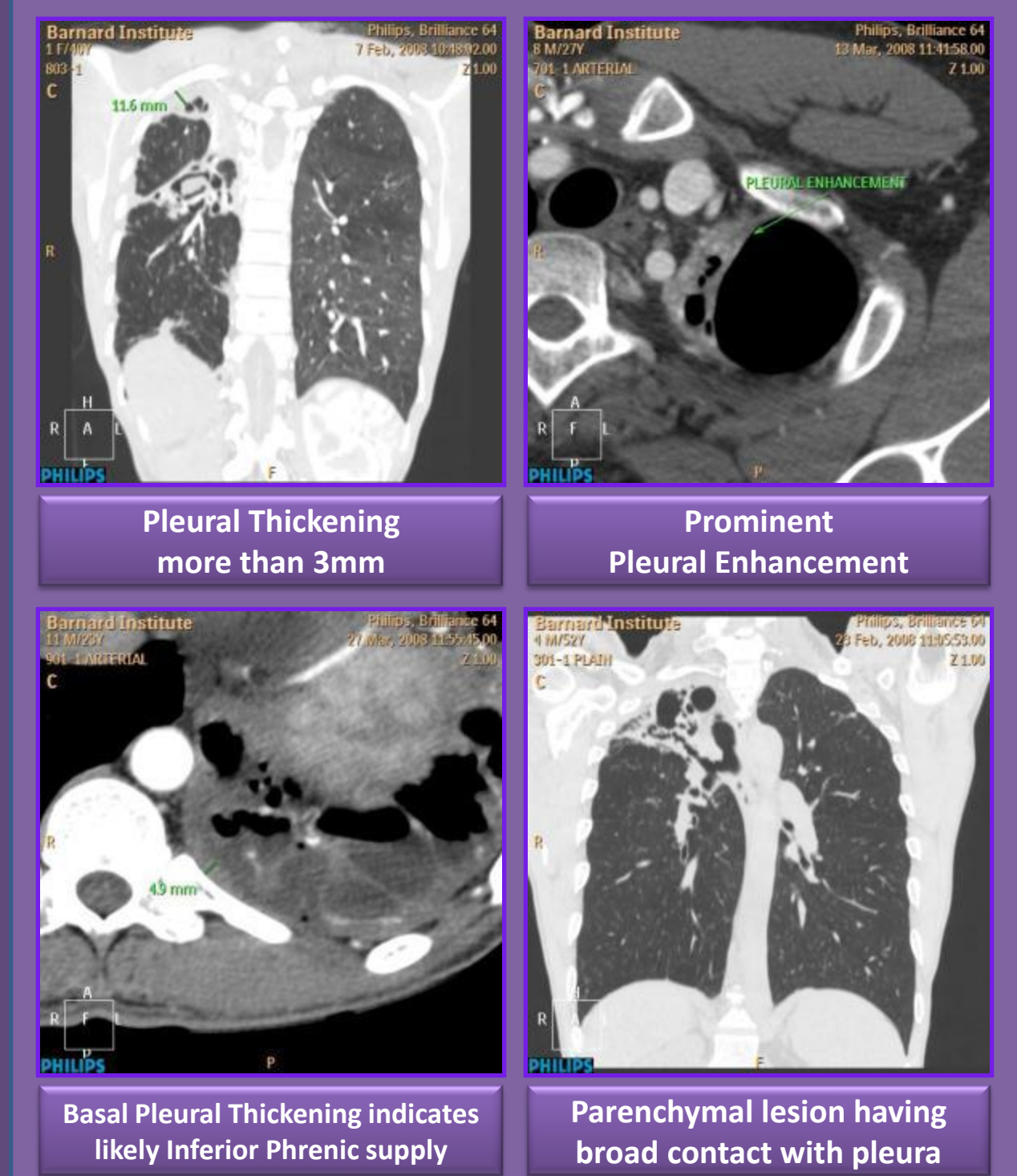
PATHOLOGIC PROCESSES CAUSING HEMOPTYSIS



CT PROTOCOL FOR STUDY



INDIRECT SIGNS OF NON BRONCHIAL SYSTEMIC ARTERIAL SUPPLY



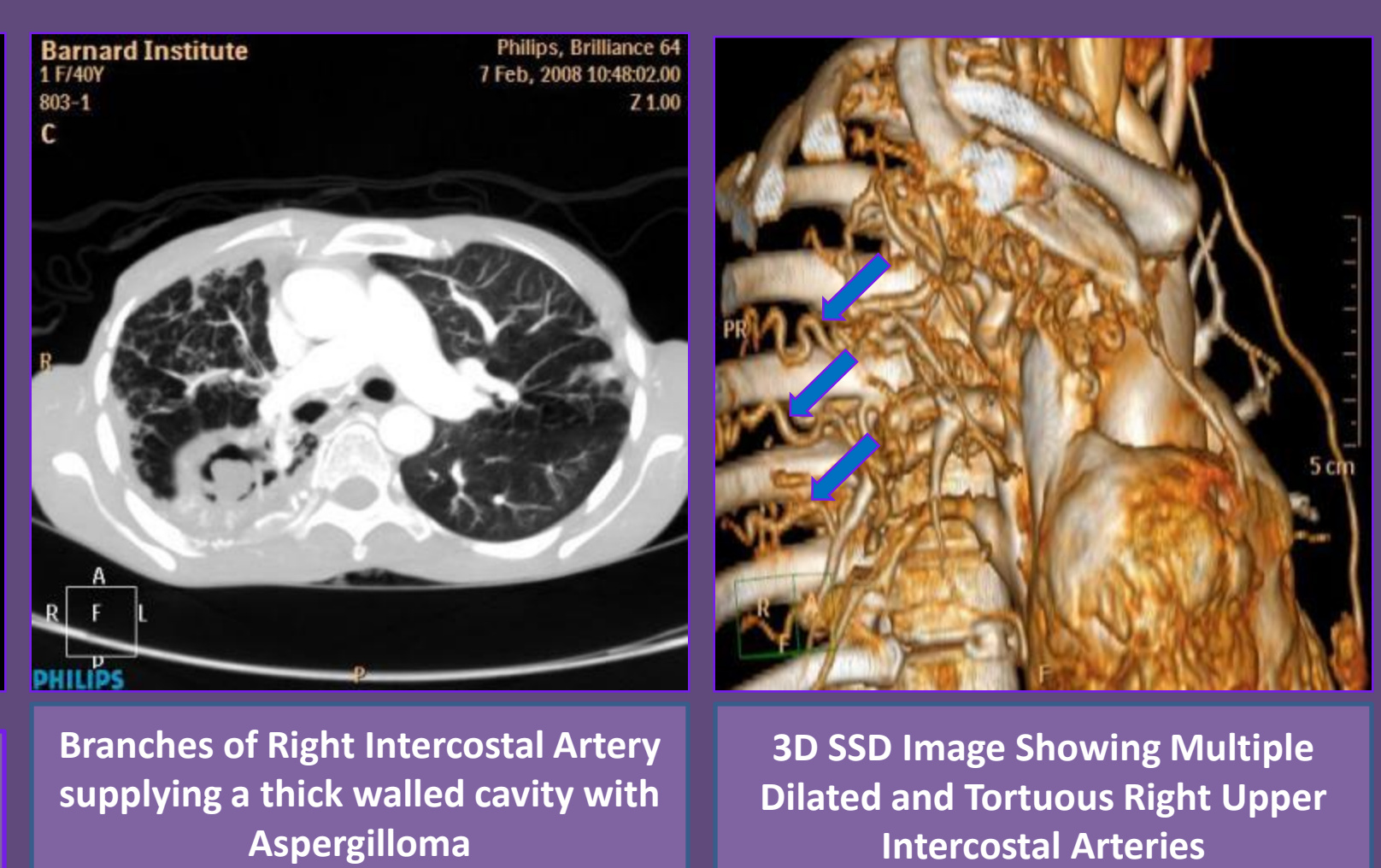
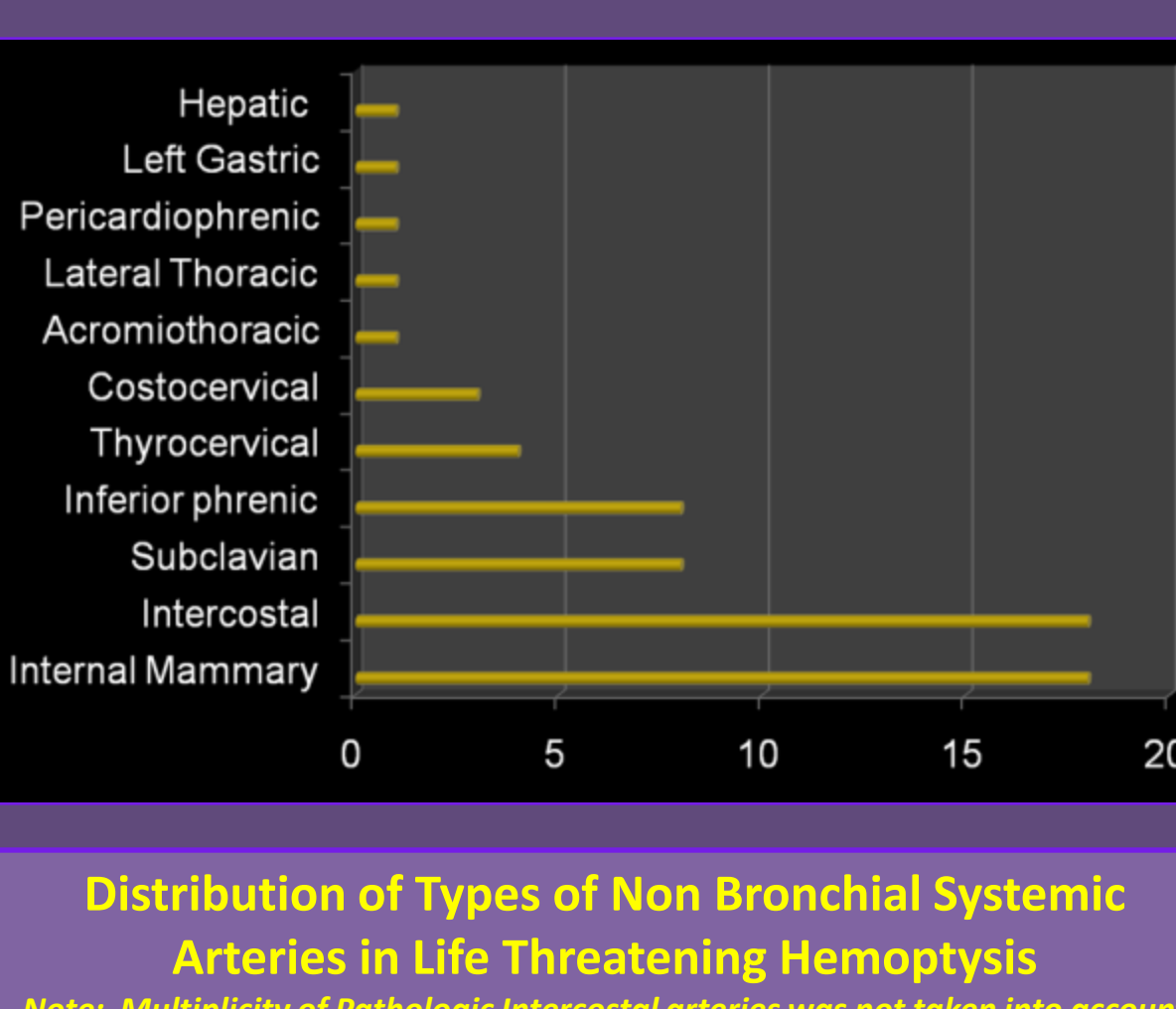
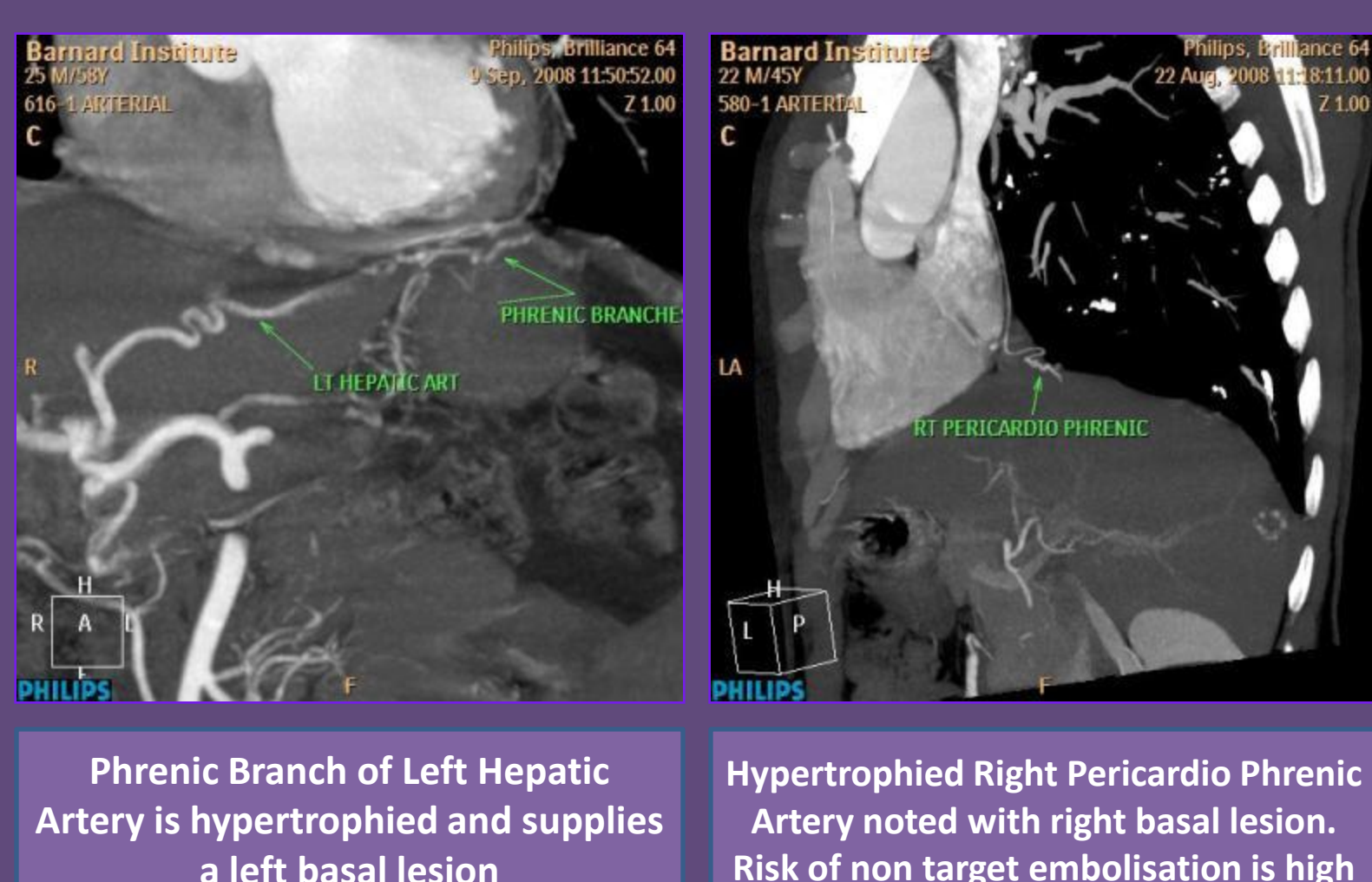
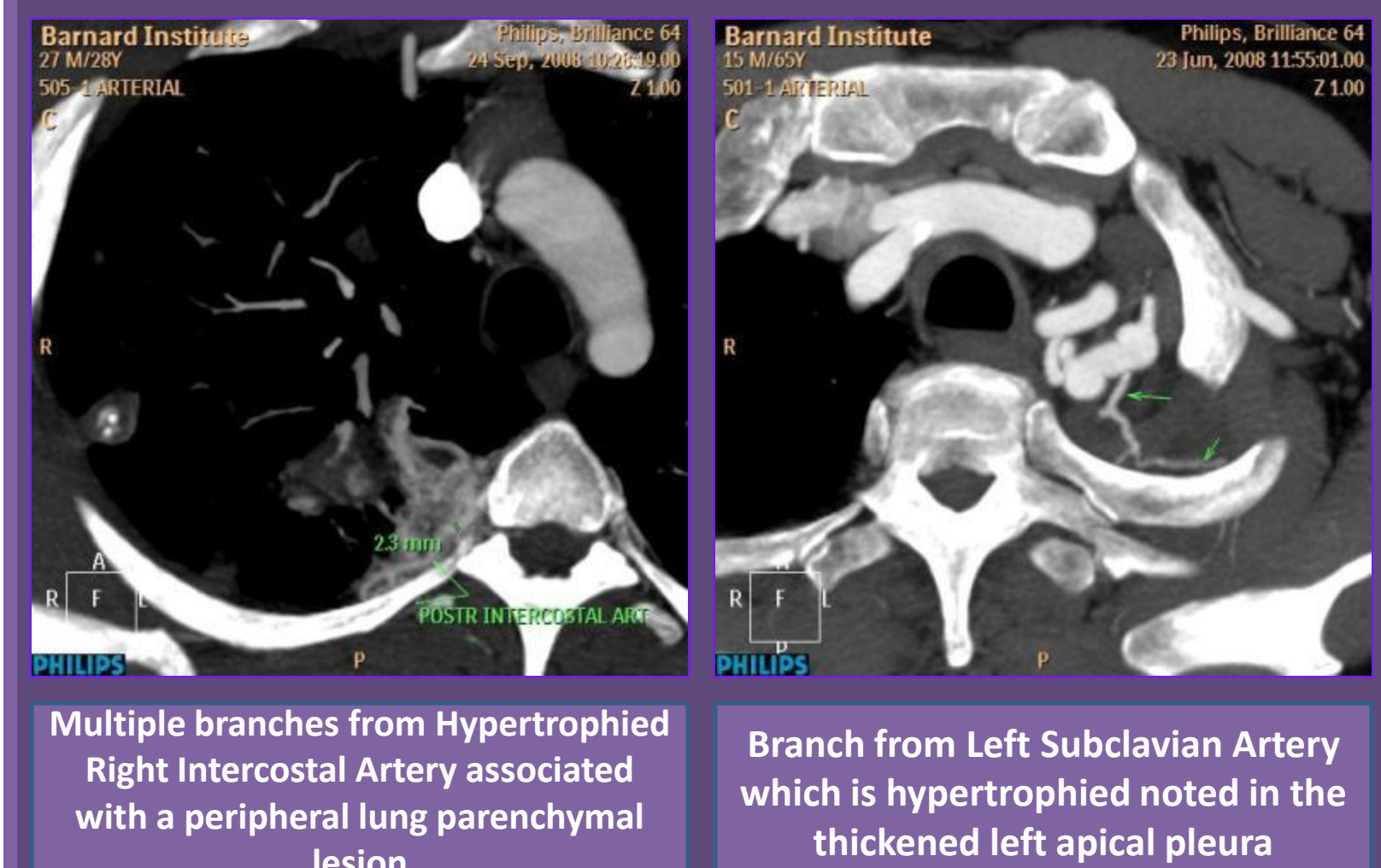
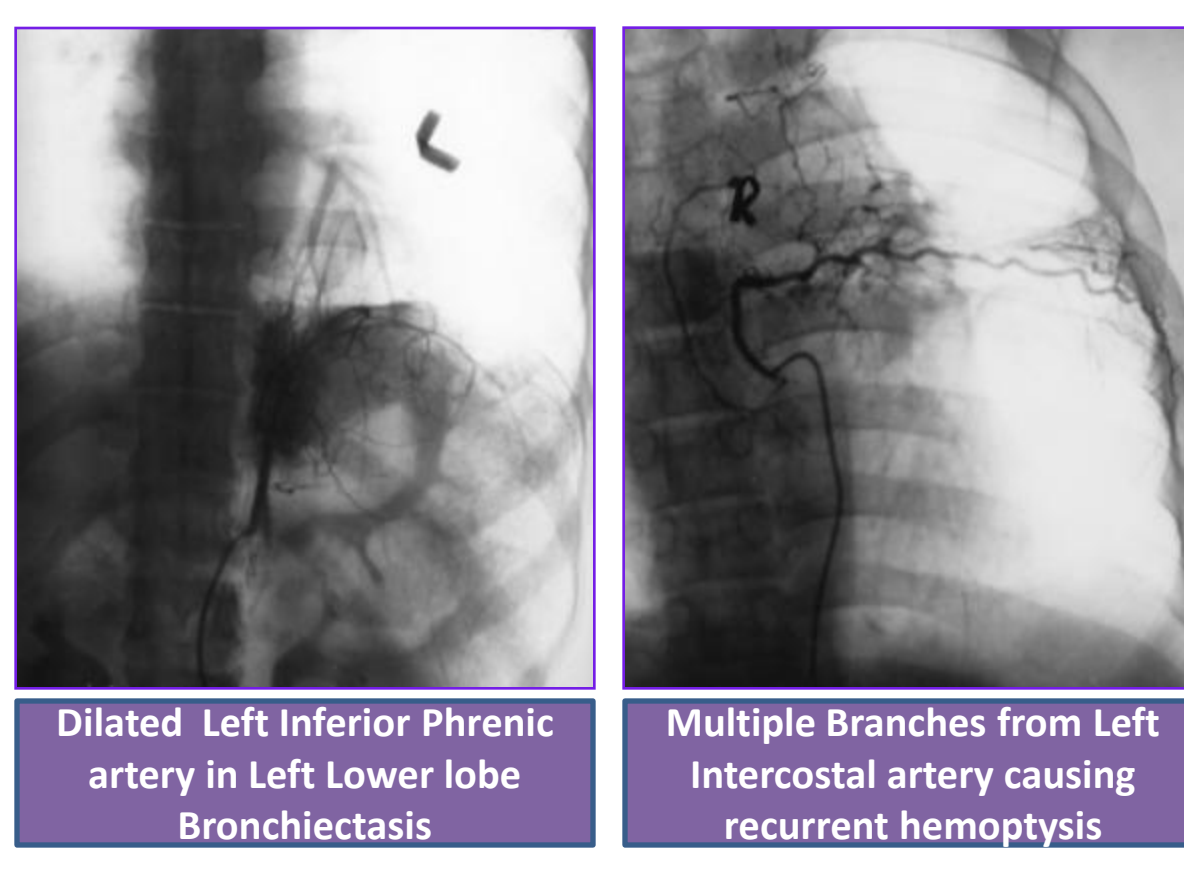
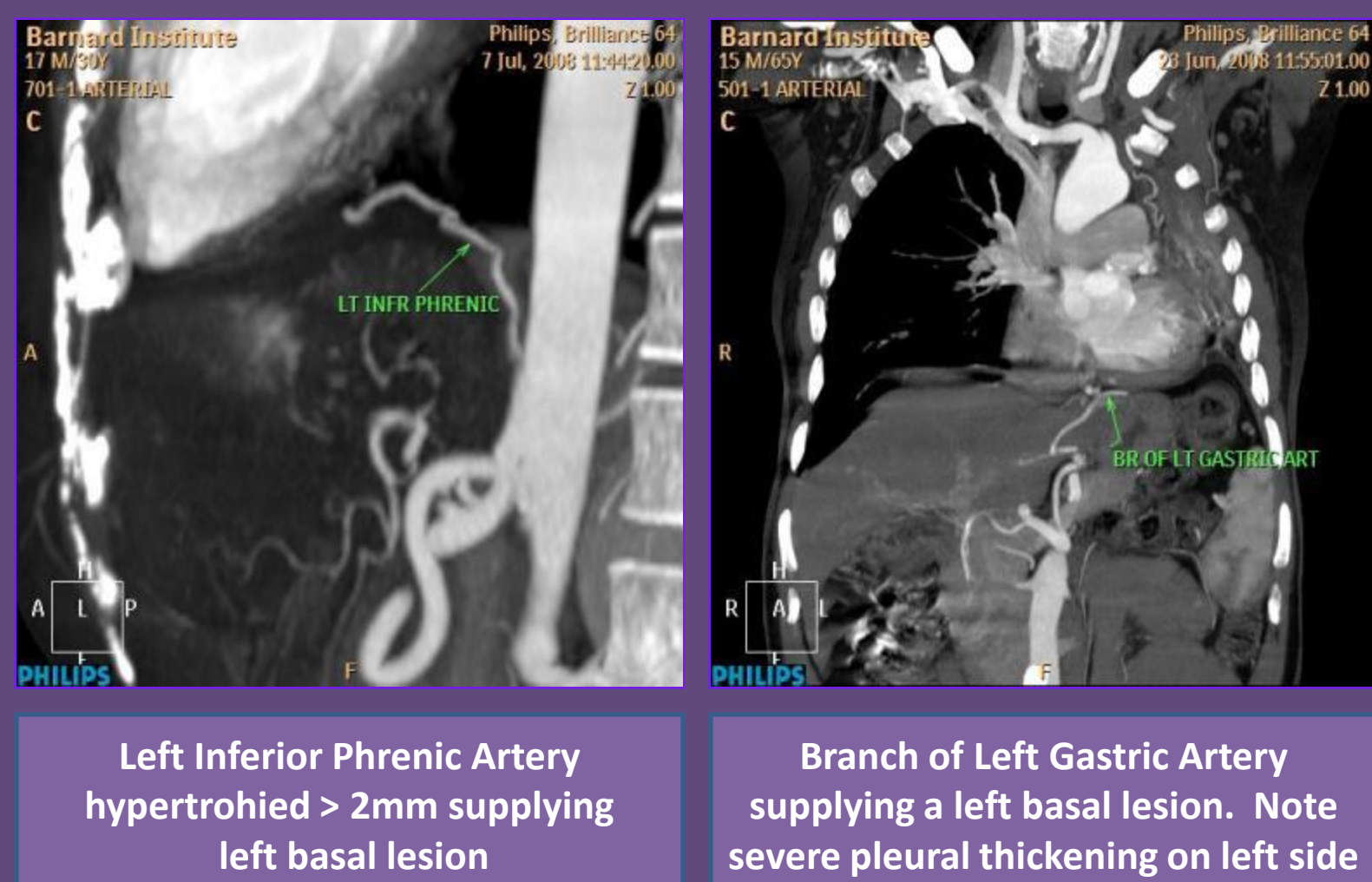
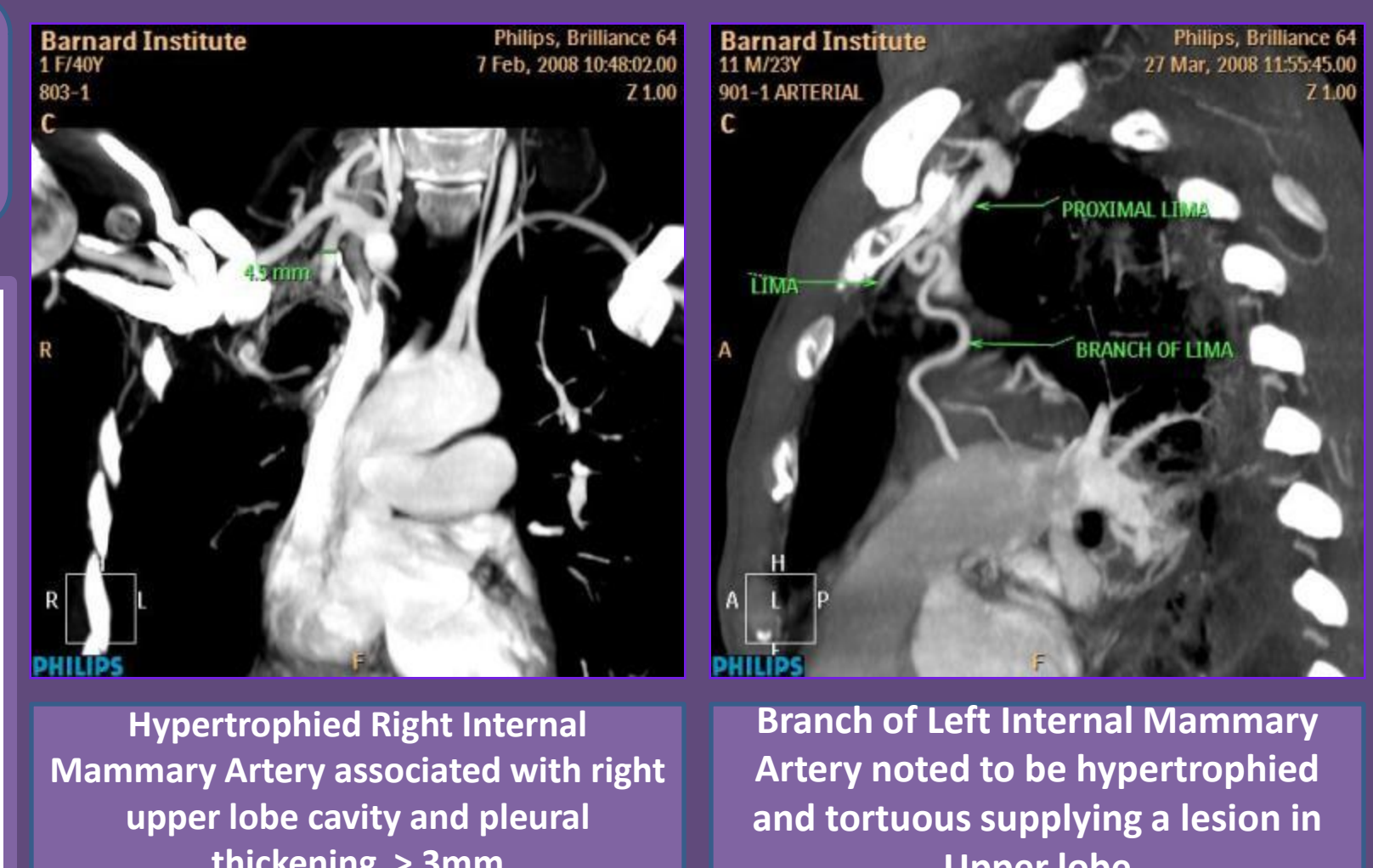
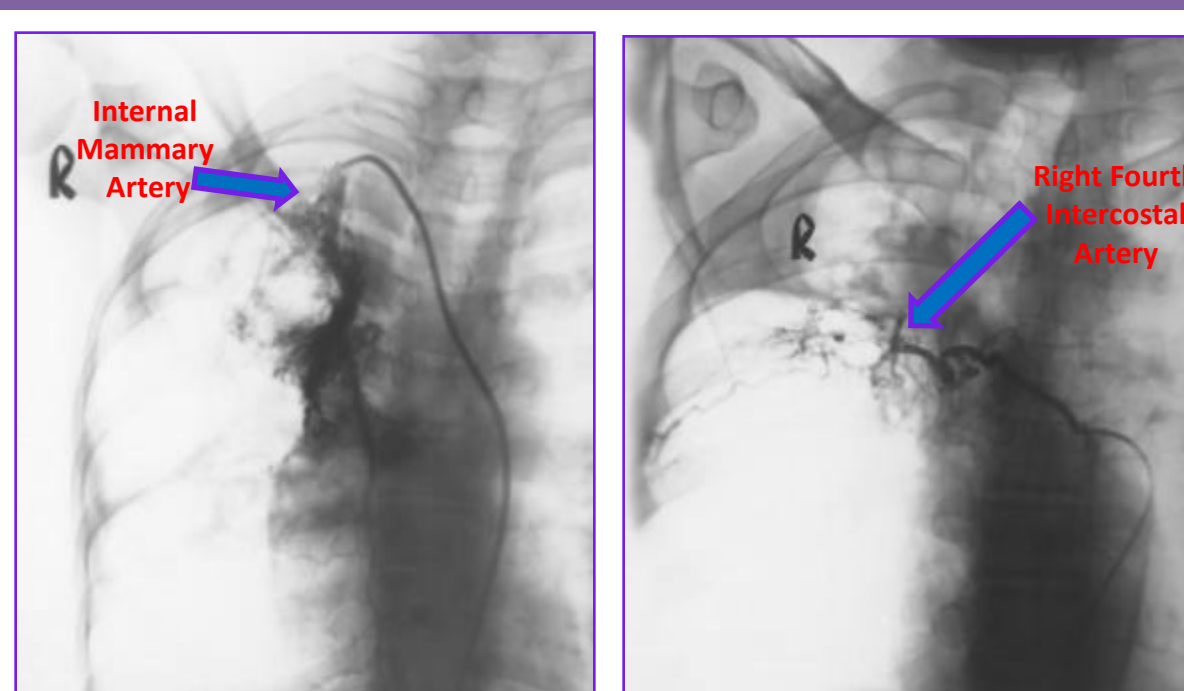
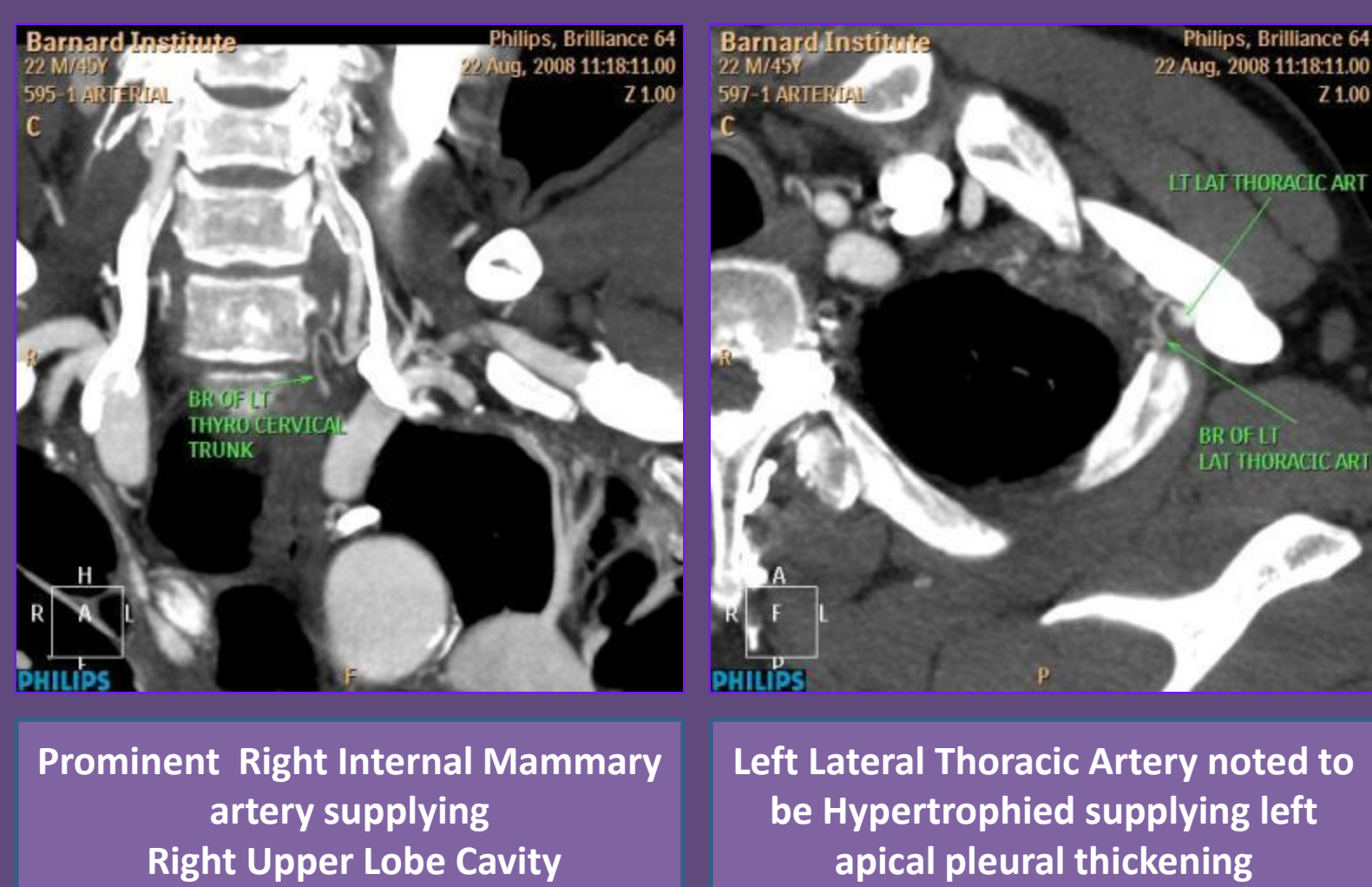
OBJECTIVE: To retrospectively evaluate nonbronchial systemic arteries at 64-detector row helical computed tomography (CT) compared with conventional angiography in patients undergoing endovascular treatment of hemoptysis.

METHODS: Sixty-four-detector row helical CT and conventional angiography of the thorax were performed in 28 patients (25 men, 3 women; age range, 18–65 years; mean age, 40 years) with life threatening hemoptysis. CT images were analyzed for visibility, traceability of nonbronchial systemic arteries from their origin at the aorta or aortic branches and were compared with conventional angiography findings.

RESULTS: Nonbronchial arterial supply was noted in 12 patients on the right side(43%) and 14 patients on the left side(50%). 23 nonbronchial systemic arteries were noted on Right side and 41 on Left side. Internal Mammary artery (29%) was found to be the most common non bronchial systemic artery on the left side and Intercostal arteries (34%) were found to be the most common nonbronchial systemic artery on the right side. Subclavian, costocervical trunk, thyrocervical acromiothoracic, lateral thoracic, pericardiophrenic, inferior phrenic, gastric and hepatic arteries were the other nonbronchial systemic arteries detected. Pleural thickening more than 3mm was found to be a good predictor of nonbronchial systemic supply. Internal mammary artery diameter greater than 3mm and Inferior phrenic artery diameter more than 2mm were sensitive indicators for nonbronchial systemic supply.

CONCLUSION: MDCT accurately depicts the origin, size and course of non bronchial systemic arteries in cases of life threatening hemoptysis and serves as a road map for percutaneous transcatheter embolization.

Non Bronchial Sustomeric Arteries At Angiography



References:

(1)Young Cheol Yoon et al; Hemoptysis: Bronchial and Nonbronchial Systemic Arteries at 16-Detector Row CT; *Radiology* 2005; 234:292-298 (2)Martine Remy-Jardin et al; Bronchial and Nonbronchial Systemic Arteries at Multi-Detector Row CT Angiography: Comparison with Conventional Angiography; *Radiology* 2004; 233:741-749 (3) John F. Bruzzi et al; Multi-Detector Row CT of Hemoptysis; *RadioGraphics* 2006; 26:3-22 (4) Woong Yoon et al; Bronchial and Nonbronchial Systemic Artery Embolization for Lifethreatening Hemoptysis: A Comprehensive Review; *RadioGraphics* 2002; 22:1395-1409 (5) Uflacker et al. Bronchial artery embolization in the management of hemoptysis: technical aspects and long-term results. *Radiology* 1985; 157:637-644