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Heather Geist
heather.geist@lvhn.org

James K. Wu MD
Lehigh Valley Health Network, james.wu@lvhn.org

Raymond Singer MD
Lehigh Valley Health Network, raymond.singer@lvhn.org

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Surgical Treatment of Multiple Vein Graft Aneurysms in 72 Year Old Man

Heather Geist, Raymond Singer MD, James Wu MD

Department of Surgery, Division of Cardiothoracic Surgery, Lehigh Valley Health Network, Allentown, Pennsylvania

Introduction

Saphenous vein graft (SVG) aneurysms following coronary artery bypass graft (CABG) surgery are rare but fatal complications that frequently require surgical repair.¹ This study addresses a rare surgical case involving two SVG aneurysms with thrombus in an 72 year old man, requiring a third sternotomy 22 years following CABG.

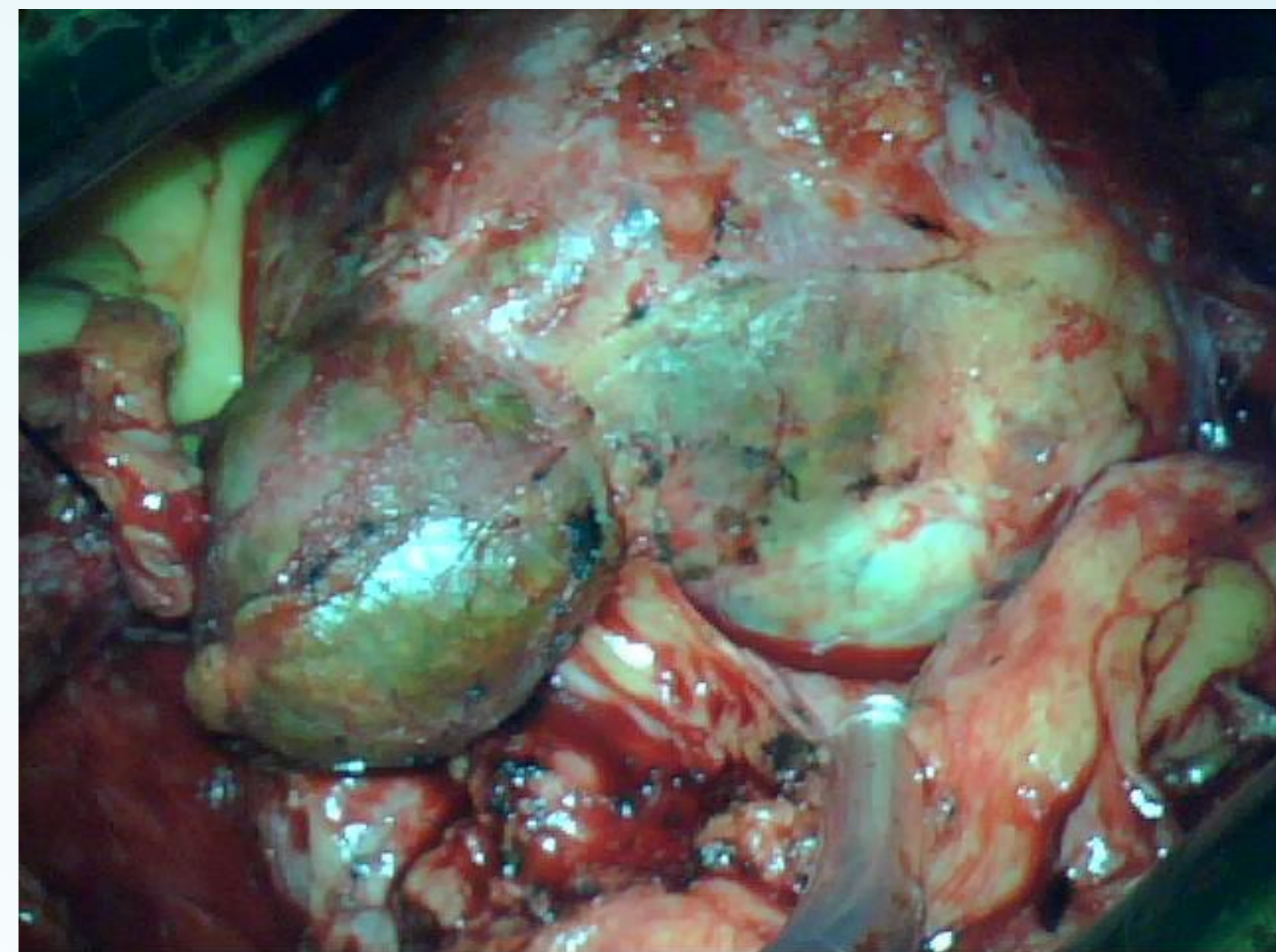


Figure 1. Aneurysmal right coronary artery bypass graft prior to resection

Methods

All information was gathered retrospectively using the LVHN medical records and database. Patient data was analyzed primarily from 2007 to the present. Surgical dictations, CT scans, and chest x-rays were all reviewed.



Results

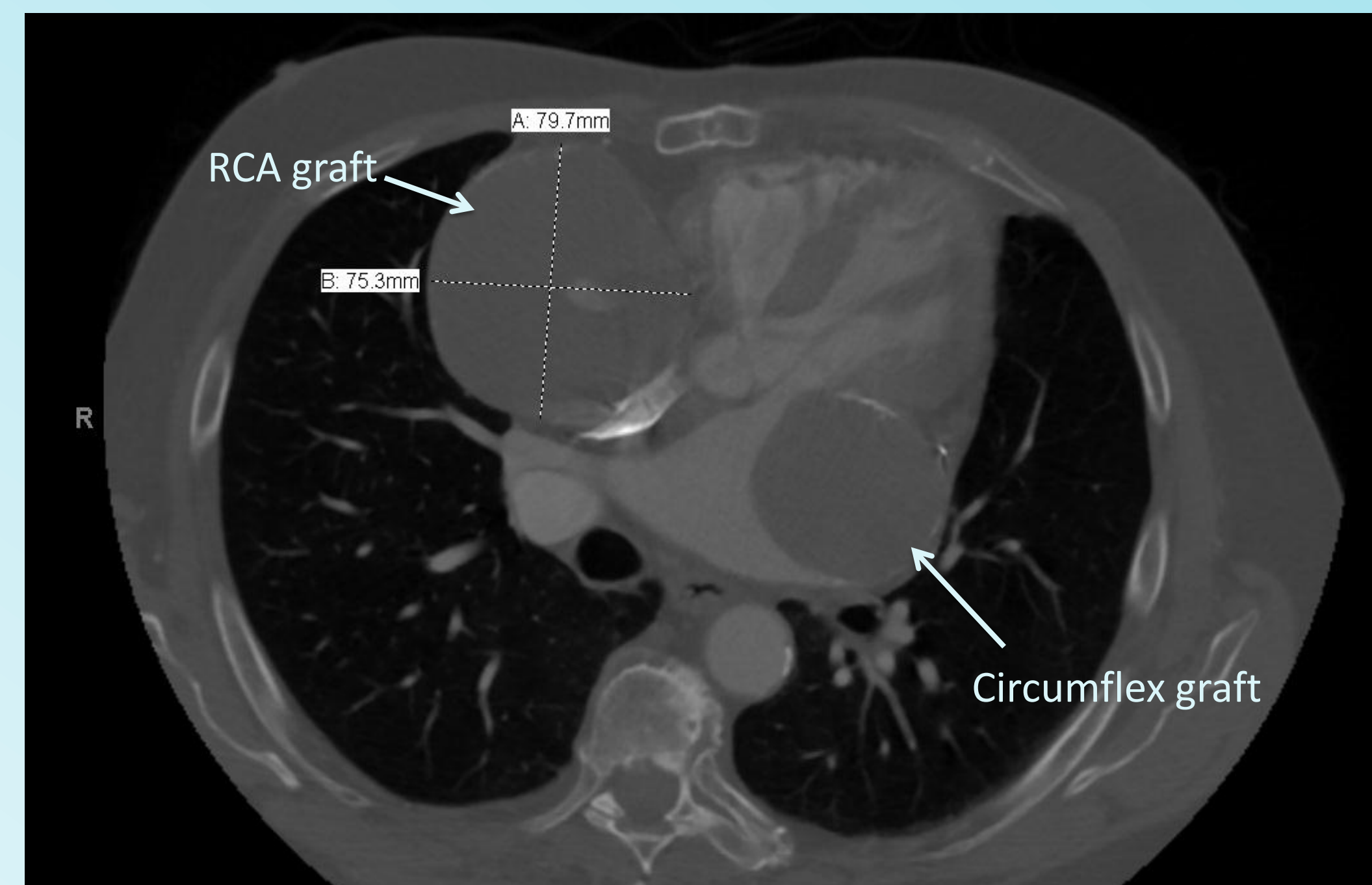


Figure 2. Patient CT scan prior to surgery showing the 8 cm RCA graft and 5 cm circumflex graft aneurysms

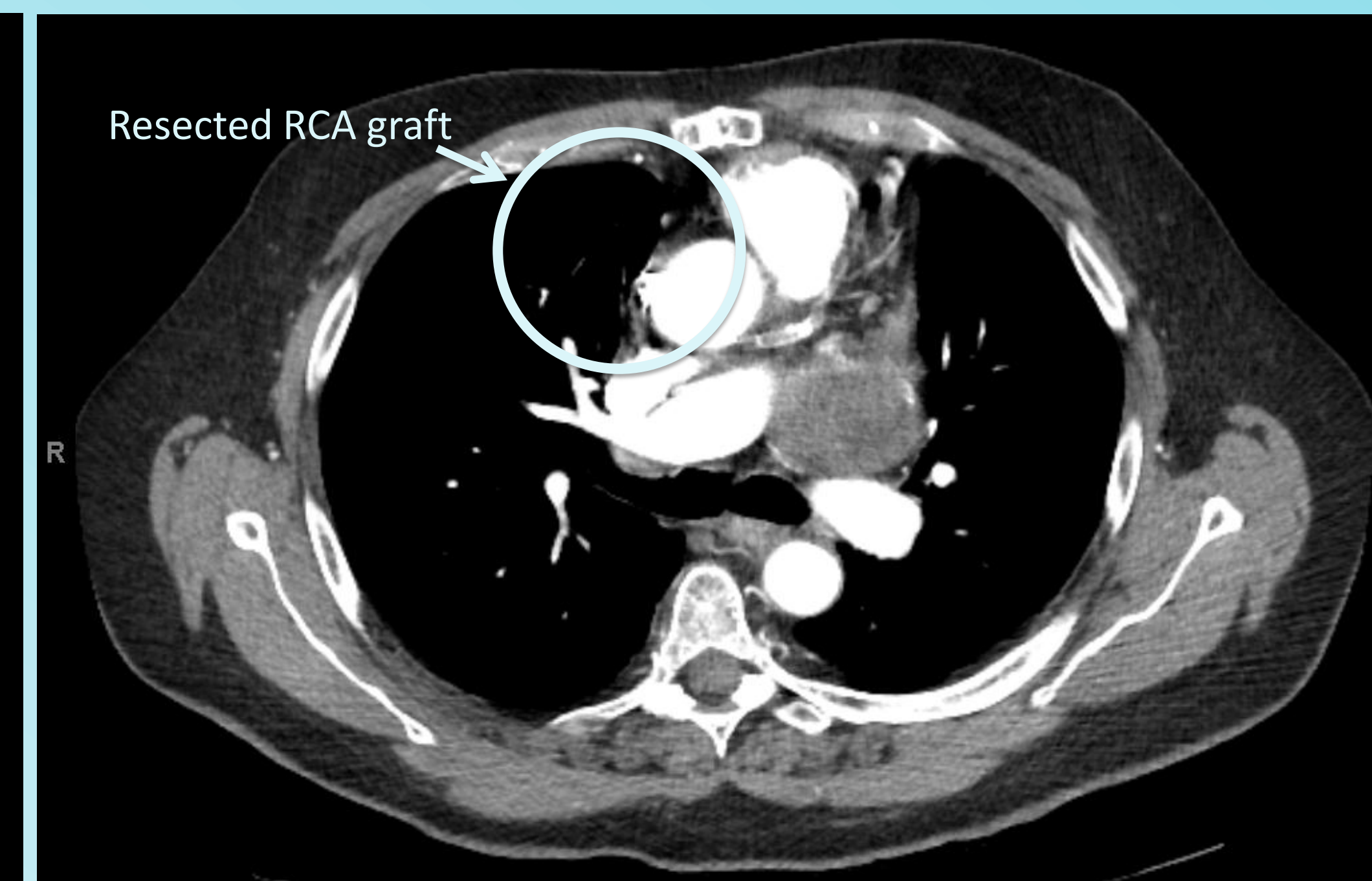


Figure 3. Patient CT scan following surgery showing the removal of the 8 cm RCA graft aneurysm

Year	Preliminary Cause for Surgery	Surgical Procedures
1991	Emergent, unstable angina	CABG x3, SVGs to LAD, second marginal and RCA
2007	Significant dyspnea, substernal chest pressure, catheterization showed LAD with stenosis, RCA graft occluded and aneurysmal, second marginal occluded	Redo sternotomy, CABG x2, LIMA to LAD and a SVG to second marginal
2013	Following syncope episode, growth of RCA graft aneurysm from 4 cm to 8 cm	Redo sternotomy, resection of giant RCA vein graft aneurysm, CABG x1 with CryoVein to distal posterior descending artery

Table 1. Significant cardiothoracic surgical procedures and timeline of occurrence with description

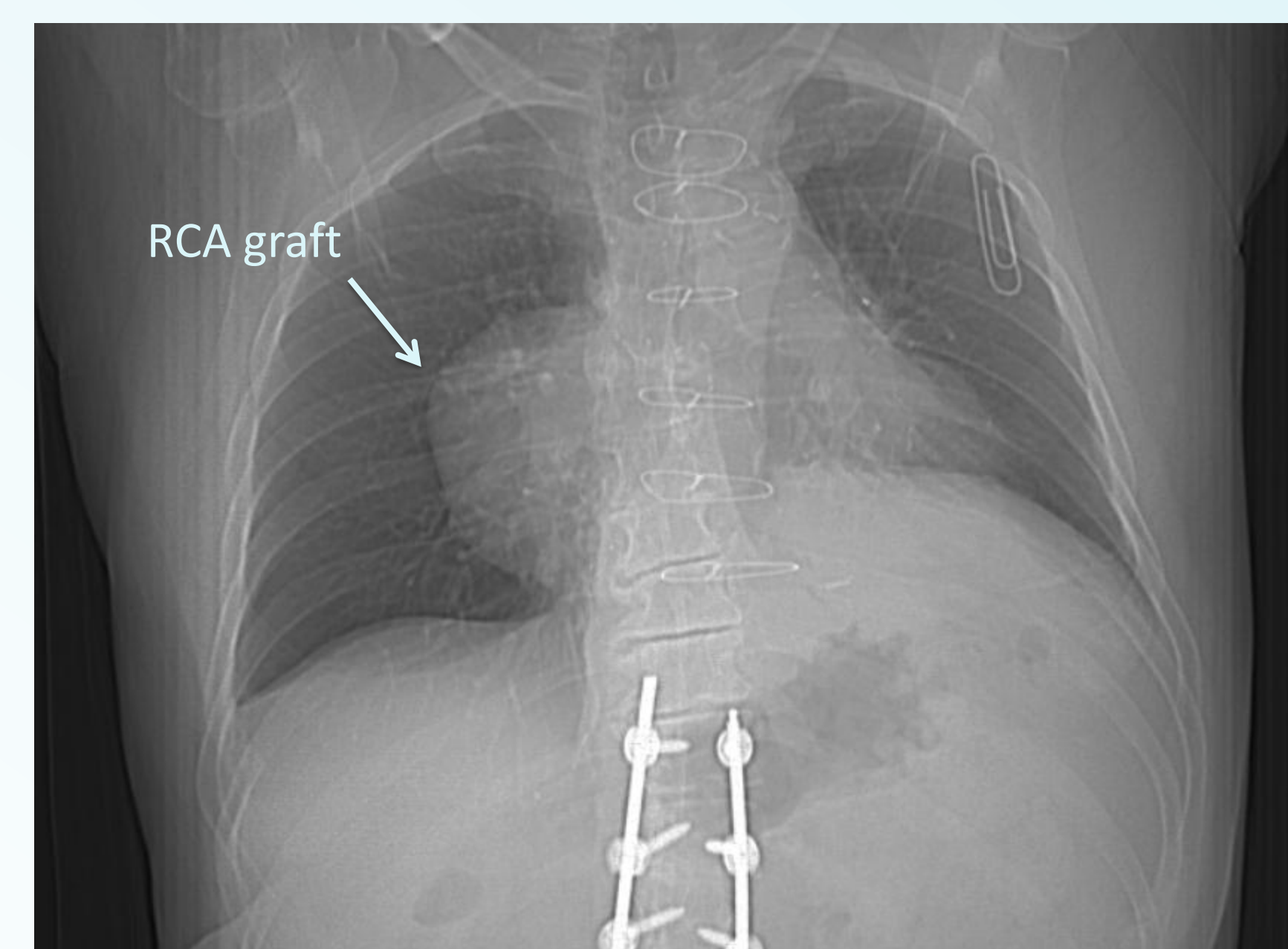


Figure 4. Chest x-ray of patient with evident aneurysmal bulge of RCA

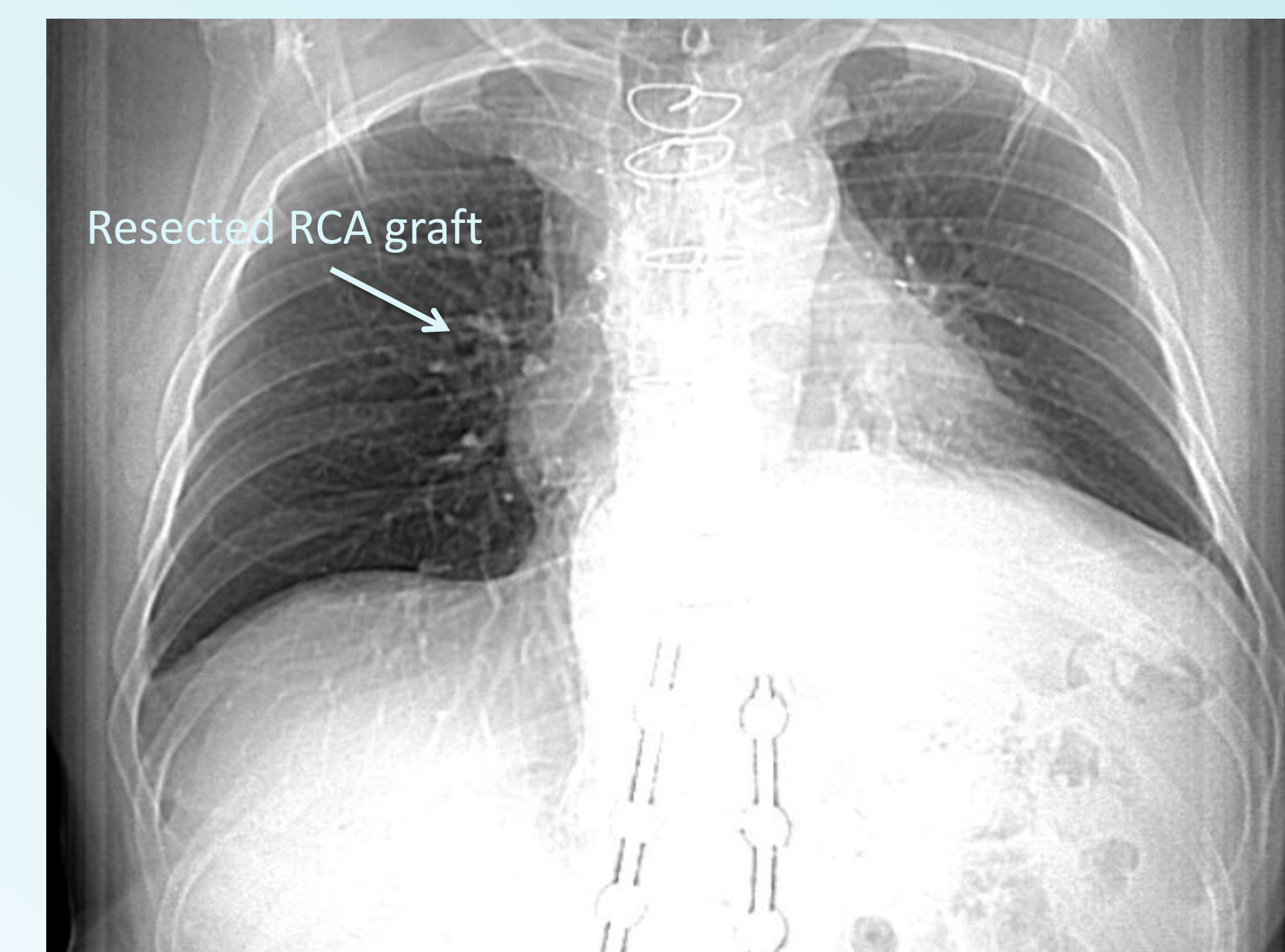


Figure 5. Chest x-ray of patient following surgery with removal of RCA aneurysm

Conclusion

True or pseudoaneurysms can arise following CABG surgery. It was determined that this patient presented with two true aneurysms, which are frequently late complications after surgery.² Our patient presented with common symptoms accompanying aneurysms, including a syncope episode,³ history of hyperlipidemia, and a history of myocardial infarction.⁴

A previous study using a small cohort had found that SVG aneurysms to the RCA and circumflex were two of the three most frequent aneurysmal grafts.⁴ Complications experienced by this patient as a result of the aneurysm lead to necessary surgical intervention.

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