

# Advancing Health

**A CASE STUDY** from MedStar Heart & Vascular Institute

*A multidisciplinary approach to diagnosis and treatment*

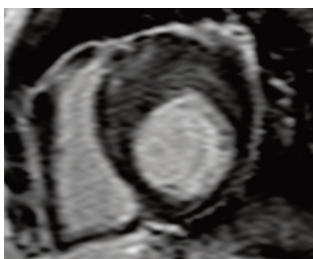
## Primary Cardiac Lymphoma

Ana Barac, MD, PhD, FACC

Director of MedStar Heart & Vascular Institute's Cardio-Oncology Program,  
and Associate Professor of Medicine and Oncology at Georgetown University

### Abstract

A woman was diagnosed with a pericardial effusion and a large left ventricular mass. Differential diagnosis included primary cardiac malignancies, and a multidisciplinary treatment strategy was prepared to promptly initiate appropriate treatment, pending biopsy results. After the diagnosis of primary cardiac lymphoma was made, it was successfully treated using chemotherapy.



**Cardiac MR of the heart** (Left) Before treatment showing diffuse abnormal enhancement in the entire basal anterior wall extending into the septum and lateral wall.

(Right) After chemotherapy there is a complete disappearance of abnormal myocardial signal with a thin layer of residual epicardial fibrosis in the anterior wall.

  
MedStar Heart &  
Vascular Institute

 **Cleveland Clinic**  
Heart and Vascular Institute

# CASE STUDY

## Primary Cardiac Lymphoma

---

### Patient Presentation

- A woman in her late 60s originally treated for incidental pericardial effusion subsequently experienced shortness of breath and pending cardiac tamponade. A biopsy and pericardial fluid analysis reported reactive lymphocytes, but no evidence of malignancy.
- After two months, the patient's symptoms returned. Cardiac MRI revealed a large mass in the basal anterior wall of the left ventricle. Reluctant to undergo a second invasive surgery, the patient sought a second opinion from MedStar Heart & Vascular Institute at MedStar Washington Hospital Center.

### Assessment and Diagnosis

- MRI and echocardiogram confirmed the mass extended into the adjacent basal septum and superior portion of the right ventricle. Avid enhancement with gadolinium suggested a malignant cardiac tumor and associated malignant pericardial effusion.
- Although cardiac sarcomas were statistically more likely, elements of cardiac MR suggested a reasonable possibility of cardiac lymphoma. As cardiac biopsy was the only means to accurately determine the tumor's nature and treatability, the patient consented to undergo the procedure.
- Multidisciplinary image review and coordination with cardiac surgery,

pathology and oncology specialties was arranged to initiate appropriate treatment, once biopsy results were known.

### Treatment

- During a thoracotomy with lung deflation, an intra-operative biopsy indicated cardiac lymphoma. A bone marrow biopsy performed immediately post-cardiac surgery recovery proved negative. Pathology immunostains confirmed diffuse large B cell lymphoma.
- Cardiac MR on Day 10 after chemotherapy initiation demonstrated significant reduction in tumor mass with the decrease in the anterior wall thickness from 23mm to 18mm. The first cycle of R-EPOCH was administered in the coronary care unit setting with monitoring for arrhythmia and subsequent cycles with telemetry monitoring.
- Patient received six cycles of R-EPOCH regimen over three months, along with beta blockers and ACE-inhibitors. During treatment and post-treatment cardiac MR surveillance demonstrated complete regression, with minimal residual myocardial fibrosis.

### Outcomes

- The patient has been followed for three and a half years by hematology and cardiology teams, with no recurrence of lymphoma.



Ana Barac, MD, PhD, FACC

*“Even the rarest forms of cancer have a greater chance for successful management and treatment, when patients have access to a broad range of surgical and oncological expertise. Still, it’s essential for all members of the treatment team to take a comprehensive and coordinated approach to assessment, diagnosis and treatment.”*

– Ana Barac, MD, PhD, FACC

## **MedStar Heart & Vascular Institute: A Network of Innovation**

MedStar Heart & Vascular Institute is one of the top-ranked cardiovascular programs in the mid-Atlantic, offering patients access to some of the nation’s most experienced specialists and the services of the 10 MedStar hospitals in Greater Washington and Central Maryland. Our hallmark is the depth and breadth of our expertise, and a long-standing commitment to collaboration that brings the very best team-based thinking to each and every patient.

### **Conclusion**

- Though cardiac lymphoma is among the rarest of cardiac tumors, it should nevertheless be considered as a possible source or contributor to a patient’s condition, until an accurate diagnosis is made.
- Diagnostic and treatment approaches should involve multidisciplinary review, discussion and coordination to ensure timely determination and initiation of a proper treatment strategy.



MedStar Washington Hospital Center  
110 Irving Street, NW, EB 7118  
Washington, DC 20010

---

**MedStar Heart & Vascular Institute  
at MedStar Washington Hospital Center  
110 Irving St., NW  
Washington, DC 20010**

Patients with cardiac masses can benefit greatly from prompt evaluation and diagnosis, and immediate access to multiple treatment specialties. To discuss a patient, please contact Dr. Barac, at **202-877-7777**.

To learn more please visit **[MedStarHeartInstitute.org](http://MedStarHeartInstitute.org)**.

Decorative wavy lines in blue and yellow colors sweep across the bottom of the page.

Non-Profit  
Organization  
U.S. Postage

**PAID**

MedStar Washington  
Hospital Center