This sheet explains what a cardiac fibroma is and how Boston Children’s Hospital approaches treatment.

Key points
- A cardiac fibroma is a non-cancerous heart tumor.
- A tumor can interfere with the way the heart works, blocking blood flow to vital organs and causing an abnormal heart rhythm (arrhythmia).
- Boston Children’s is experienced in surgeries to remove these tumors.

What is a cardiac fibroma?
- Children are born with this tumor.
- The tumor is a benign (non-cancerous) mass of tissue.
- They tend to be very large. They can sometimes be almost as large as the rest of the heart.
- The tumor is usually in the left ventricle (1 of the 4 parts of the heart that blood flows through). (See figure 1).

Is it associated with other conditions?
- It is often associated with arrhythmias and ventricular tachycardia.
  - An arrhythmia is an irregular with the heartbeat. An arrhythmia is potentially life threatening.
  - Ventricular tachycardia is an abnormal heart rhythm that starts in the ventricles and is often associated with a sudden loss of consciousness or cardiac arrest.
  - Our research suggests that these heart rhythm abnormalities may be caused by strands of heart muscle that grow through the tumor.
- A fibroma is sometimes found in people with Gorlin syndrome (also known as nevoid basal cell carcinoma syndrome).
  - Gorlin syndrome is a condition caused by a genetic mutation (a change in the way a gene grows) in the PTCH1 gene.
  - We recommend a genetics evaluation if your child has a cardiac fibroma, to see if they have this syndrome.

How can you tell if my child has a cardiac fibroma?
- Fibromas are often found before birth and in young infants. They are rarely discovered for the first time in older children or adults.
- The mass may be seen in the heart on a prenatal screening ultrasound.
- The diagnosis is more certain if the tumor certain characteristics on cardiac magnetic resonance imaging (MRI). This is a test that shows pictures of the inside of the body.
- When fibroma is found after birth, it is usually due to an abnormal appearance of the heart on chest x-ray or symptoms, such as:
  - Heart murmur
  - Changes in the heart rhythm
  - Loss of consciousness
  - Having trouble breathing
  - In some tragic cases, sudden death
- We may recommend monitoring your child’s heart rhythm with an electrocardiogram or a Holter monitor (a small heart monitor your child wears).

What problems does it cause?
- Even benign tumors can be life threatening because they can interfere with the way the heart works, causing blockages and dangerous arrhythmias.
- Research at Boston Children’s Hospital has shown that the heart rhythm abnormalities are probably due to strands of heart muscle within the tumors.
- The mass can cause a narrowing of the pathway of blood through the heart, which may affect circulation.
- It can cause leakage in the heart valves (part of the heart that controls blood flow).

What is the treatment?
- Surgery may be an option at highly specialized hospitals like Boston Children’s, where we have developed techniques to remove these large tumors.
- Our experience has found that debulking (removing some of the tumor) or resection (taking out all of the tumor) in people with ventricular arrhythmias usually stops the heart rhythm abnormality.
- We usually do not recommend heart transplants for children with cardiac fibroma, even when the tumors are very large.

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