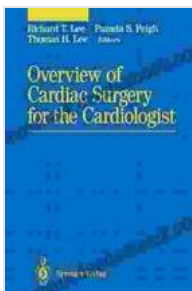


# Overview of Cardiac Surgery for the Cardiologist: Graduate Texts in Mathematics

This book provides a comprehensive overview of cardiac surgery for cardiologists. It covers the history of cardiac surgery, the different types of cardiac surgery, the risks and benefits of cardiac surgery, and the perioperative management of cardiac surgery patients.



## Overview of Cardiac Surgery for the Cardiologist

(Graduate Texts in Mathematics; 143) by Victoria Neumann

★★★★☆ 4.7 out of 5

Language : English  
File size : 4445 KB  
Text-to-Speech : Enabled  
Screen Reader : Supported  
Enhanced typesetting : Enabled  
Print length : 174 pages



The book is divided into four parts. The first part provides an overview of the history of cardiac surgery, from the early pioneers to the present day. The second part discusses the different types of cardiac surgery, including coronary artery bypass grafting, valve surgery, and heart transplantation. The third part discusses the risks and benefits of cardiac surgery, including the risks of death, stroke, and infection. The fourth part discusses the perioperative management of cardiac surgery patients, including the preoperative evaluation, the intraoperative care, and the postoperative care.

This book is a valuable resource for cardiologists who are interested in learning more about cardiac surgery. It provides a comprehensive overview of the subject, and it is written in a clear and concise style.

## **History of Cardiac Surgery**

The history of cardiac surgery can be traced back to the early 19th century, when surgeons began to perform operations on the heart to repair congenital defects. In 1896, Ludwig Rehn performed the first successful pericardiectomy, and in 1902, Alexis Carrel performed the first successful heart-lung bypass. In the 1950s, John Gibbon developed the heart-lung machine, which made it possible to perform open-heart surgery.

The first successful coronary artery bypass grafting (CABG) was performed in 1967 by Rene Favaloro. CABG is now the most common type of cardiac surgery, and it is used to treat coronary artery disease, which is the leading cause of death in the United States.

## **Types of Cardiac Surgery**

There are many different types of cardiac surgery, but the most common types include:

- Coronary artery bypass grafting (CABG)
- Valve surgery
- Heart transplantation
- Aortic aneurysm repair
- Atrial septal defect repair
- Ventricular septal defect repair

- Tetralogy of Fallot repair

The type of cardiac surgery that is performed depends on the patient's individual condition. CABG is the most common type of cardiac surgery, and it is used to treat coronary artery disease. Valve surgery is used to repair or replace damaged heart valves. Heart transplantation is used to treat end-stage heart failure. Aortic aneurysm repair is used to repair a weakened area in the aorta, the main artery that carries blood from the heart to the body.

### **Risks and Benefits of Cardiac Surgery**

Cardiac surgery is a major operation, and there are risks associated with the procedure. The risks of cardiac surgery include:

- Death
- Stroke
- Infection
- Bleeding
- Kidney failure
- Respiratory failure

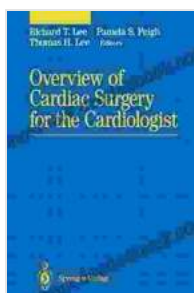
The benefits of cardiac surgery outweigh the risks for most patients.

Cardiac surgery can relieve symptoms, improve quality of life, and prolong life.

### **Perioperative Management of Cardiac Surgery Patients**

The perioperative management of cardiac surgery patients is important to ensure the best possible outcome. The preoperative evaluation includes a thorough history and physical examination, as well as laboratory tests and imaging studies. The intraoperative care includes the use of anesthesia, cardiopulmonary bypass, and surgical techniques to perform the operation. The postoperative care includes monitoring the patient's vital signs, providing pain medication, and preventing complications.

Cardiac surgery is a complex and challenging procedure, but it can be life-saving for patients with heart disease. The risks and benefits of cardiac surgery should be carefully considered before making a decision about whether or not to have the surgery.



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