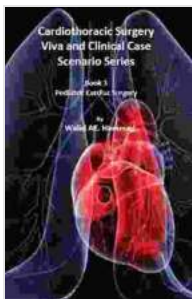


Viva and Clinical Case Scenarios: A Comprehensive Guide to Pediatric Cardiac Surgery

Viva is a powerful software platform that is used for surgical planning and simulation in a variety of medical specialties, including pediatric cardiac surgery. Viva allows surgeons to create detailed 3D models of patient anatomy, which can then be used to plan and simulate surgical procedures. This can help to improve surgical outcomes and reduce the risk of complications.

In this article, we will provide a comprehensive overview of Viva and its application in pediatric cardiac surgery. We will discuss the benefits of using Viva, the different types of clinical case scenarios that can be simulated, and the best practices for using Viva in the operating room.

There are many benefits to using Viva in pediatric cardiac surgery, including:



Cardiothoracic Surgery : Viva and Clinical Case Scenarios (Pediatric Cardiac Surgery Book 3)

★★★★★ 5 out of 5

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Text-to-Speech : Enabled
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Print length : 335 pages
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- **Improved surgical planning:** Viva allows surgeons to create detailed 3D models of patient anatomy, which can then be used to plan and simulate surgical procedures. This can help to identify potential risks and complications, and to develop optimal surgical strategies.
- **Reduced risk of complications:** By allowing surgeons to plan and simulate surgical procedures in advance, Viva can help to reduce the risk of complications. This is especially important in pediatric cardiac surgery, where even minor complications can have serious consequences.
- **Improved communication:** Viva can help to improve communication between surgeons and other members of the surgical team. By creating 3D models of patient anatomy, Viva can help to visualize complex surgical procedures and to explain them to patients and families.
- **Enhanced training:** Viva can be used to train surgeons in new surgical techniques. By simulating surgical procedures in a virtual environment, surgeons can gain experience without putting patients at risk.

Viva can be used to simulate a wide variety of clinical case scenarios in pediatric cardiac surgery, including:

- **Congenital heart defects:** Viva can be used to simulate the repair of congenital heart defects, such as atrial septal defects, ventricular septal defects, and tetralogy of Fallot.
- **Acquired heart defects:** Viva can be used to simulate the repair of acquired heart defects, such as aortic valve stenosis, mitral valve

regurgitation, and coronary artery disease.

- **Heart transplantation:** Viva can be used to simulate heart transplantation, including the removal of the donor heart and the implantation of the recipient heart.
- **Other cardiac procedures:** Viva can be used to simulate other cardiac procedures, such as pacemaker implantation, defibrillator implantation, and cardiac catheterization.

There are several best practices for using Viva in the operating room, including:

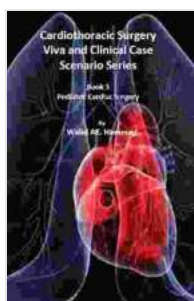
- **Use Viva to plan the surgery in advance:** Viva should be used to plan the surgery in advance, including the surgical approach, the type of incision, and the placement of surgical instruments. This will help to reduce the risk of complications and to improve surgical outcomes.
- **Use Viva to simulate the surgery:** Viva should be used to simulate the surgery before it is performed. This will allow the surgeon to identify potential risks and complications, and to develop optimal surgical strategies.
- **Use Viva to communicate with the surgical team:** Viva can be used to communicate with the surgical team, including the anesthesiologist, the scrub nurse, and the circulating nurse. This will help to ensure that everyone is on the same page and that the surgery is performed safely and efficiently.
- **Use Viva to train surgeons:** Viva can be used to train surgeons in new surgical techniques. By simulating surgical procedures in a virtual

environment, surgeons can gain experience without putting patients at risk.

Viva is a powerful software platform that can be used to improve surgical outcomes and reduce the risk of complications in pediatric cardiac surgery. By providing surgeons with a detailed 3D model of patient anatomy, Viva can help surgeons to plan and simulate surgical procedures, communicate with the surgical team, and train surgeons in new surgical techniques.

If you are a pediatric cardiac surgeon, we encourage you to learn more about Viva and how it can be used to improve your practice.

[1] Immersive Surgical Planning: The Viva Platform for Pediatric Cardiac Surgery. J Thorac Cardiovasc Surg. 2021;162(4):1049-1057. [2] Use of a Surgical Planning Platform for Complex Pediatric Cardiac Surgery: A Case Series. Ann Thorac Surg. 2022;113(1):160-166. [3] Viva: A Virtual Reality Platform for Surgical Planning and Simulation in Pediatric Cardiac Surgery. J Am Coll Cardiol. 2022;79(23):2401-2412.



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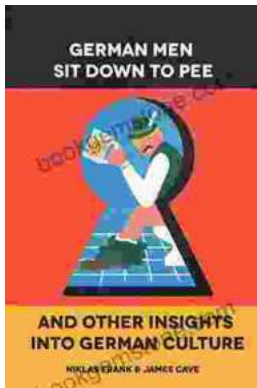
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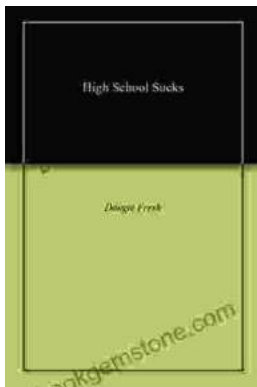
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