

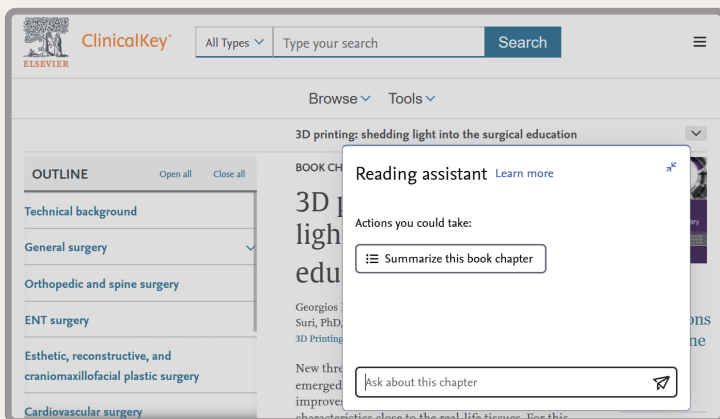
透過 ClinicalKey 閱讀助手，從 被動閱讀轉為 主動理解。

ClinicalKey 閱讀助手幫助臨床醫師從可靠的醫學文獻中提取最相關的見解。

透過摘要書籍章節與期刊文章，並在閱讀過程中直接回答問題，它減少了瀏覽長篇內容的時間，同時確保每一項回覆都基於 ClinicalKey 權威來源並附帶透明的引用來源。



立即使用您的閱讀助手



Reading assistant

Ask about this chapter



ClinicalKey 閱讀助手透過提供所視內容的簡明結構化摘要，協助減輕處理密集臨床資訊的認知負擔，並藉由更快速的導覽、複雜概念的清晰解釋，以及針對特定文本提問的能力，鼓勵與內容的主動互動。



摘要

透過 AI 生成書籍章節與期刊文章的摘要，轉化為清晰簡潔的綜述，同時保留原始素材的意義與意圖。

Reading assistant [Learn more](#)

Actions you could take:

☰ Summarize this book chapter

Summarize this book chapter

This chapter explores how 3D printing technology enhances surgical education across multiple medical specialties. It provides a comprehensive overview of applications, benefits, and future directions.

Technical Foundation

The chapter outlines the step-by-step 3D printing process from medical imaging data collection to final model production, including segmentation, design modifications, and quality assurance [1][2]

Ask about this chapter



提問

在閱讀體驗中直接以自然語言提問，以獲得基於內容且具備情境感知能力的精確回答，並能透過保持對話上下文的後續提問進行追蹤了解。

Reading assistant [Learn more](#)

Are any other key benefits of 3D printing mentioned?

Key Benefits of 3D Printing in Surgical Education

Beyond the primary educational advantages, the article highlights several important benefits:

Cost-Effectiveness

- Low-cost models ranging from \$3-5 to \$100, making technology accessible even in developing countries [1][2]
- More affordable than traditional cadaveric specimens and animal models [3][4]

Safety and Ethics

- Risk-free training environment for both physicians and patients, eliminating complications during learning [5]

Ask about this chapter



引用

每一項回覆皆包含連結至原始內容精確位置的引用來源，以確保 AI 生成回答的透明度與可追溯性。讓使用者能輕鬆驗證回覆並探索更深層的脈絡。

Reading assistant [Learn more](#)

interventions, laparoscopic procedures, and endoscopic training [2][3].

Neurosurgery: Brain retraction training, aneurysm clipping simulation, skull base surgery, and endoscopic procedures [4][5].

Orthopedic Surgery: Spine models, fracture understanding, and surgical simulation for complex procedures [6][7].

Cardiovascular Surgery: Congenital heart disease models and valve procedure training [8][9].

Other Specialties: ENT surgery simulators, plastic surgery models, urology training tools, and specialized applications [10][11].

Benefits and Future Impact

3D printing offers cost-effective, repeatable training opportunities that enhance understanding of complex anatomical structures and surgical techniques [12].

Ask about this chapter



提升病人照護品質的臨床 AI 工作站

了解如何透過 ClinicalKey 獲取可靠且具公信力的答案：
<https://www.elsevier.com/products/clinicalkey>

