

1. Record Nr.	UNINA9911015687903321
Autore	Zhang Guo-Jun
Titolo	Application of Near-infrared Fluorescence Imaging in Cancer Surgery / / edited by Guo-Jun Zhang, Jia-Hong Dong, Li Liu, Jing-Wen Bai
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
ISBN	9789819668755 9789819668748
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (526 pages)
Collana	Medicine Series
Altri autori (Persone)	DongJia-Hong LiuLi BaiJing-Wen
Disciplina	616.994 616.0754
Soggetti	Cancer - Imaging Cancer - Treatment Medicine - Research Biology - Research Cancer Imaging Cancer Therapy Biomedical Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I. Introduction of NIRF Imaging -- Chapter 1. Historical Evolution -- Chapter 2. Advantages and Limitations vs Other Medical Imaging Techniques -- Part II. Principles of NIRF Imaging -- Chapter 3. Fluorophores Used in NIRF Imaging -- Chapter 4. Instrumentation for NIRF Imaging -- Part III. Functional Imaging with NIRF in Cancer -- Chapter 5. NIRF Specific Targets -- Chapter 6. Sensing pH Changes -- Chapter 7. NIRF Imaging of Apoptosis -- Chapter 8. Functional Imaging with NIRF in Cancer Glucose Metabolism -- Chapter 9. Imaging of Cell Cycle -- Part IV. Clinical Application of NIRF Imaging Guided Surgery -- Chapter 10. Breast cancer -- Chapter 11. Gynecological Cancers -- Chapter 12. Intracranial cancer -- Chapter 13. Hepato-biliary tumors and pancreatic cancer -- Chapter 14. Head and Neck Cancer --

Sommario/riassunto

This book provides a comprehensive introduction to the development and application of near-infrared fluorescence (NIRF) in cancer surgery. It thoroughly examines the history, principles, agents, functions, and devices associated with NIRF, along with the latest preclinical research and clinical applications. Special emphasis is placed on the advancements in the second NIRF window and its global implementation in cancer surgery, including innovative molecular imaging technologies in clinical translation. Additionally, the book explores the limitations and potential solutions of NIRF, offering insights into its future trends and perspectives. It serves as a valuable resource for university researchers, surgeons, radiologists, and both undergraduate and graduate students in medicine.