

Contents

153 - ¹⁸ F-FDG PET-CT in Treatment Response Evaluation in Multiple Myeloma	395
Cristina Nanni	31
154 - ¹⁸ F-FDG PET-CT and ¹⁸ F-NaF in Treatment Response Evaluation in Osteosarcoma and Malignant Fibrous Histiocytoma	403
Gary J. R. Quinn	37

Part I Therapy Response Evaluation: Science and Practice

1 Treatment Response Evaluation: Science and Practice	3
Agustí Barnadas and Ignasi Carrió	
2 CT in Treatment Response Assessment in Oncology	11
Malavika Nathan	
3 MRI and Diffusion-Weighted MRI in Treatment Response Evaluation Overview	17
Simon Wan	
4 PET and PET-CT in Treatment Response Evaluation: Overview	27
Gabriel Buschner and Wolfgang Weber	
5 Conventional Radiological Techniques and PET-CT in Treatment Response Evaluation in Postsurgical Setting	37
Dimitrios Priftakis, Saima Riaz, and Francesco Fraioli	
6 Conventional Radiological and PET-CT Assessment of Treatment Response Evaluation in Chemotherapy Setting	49
Nagabhushan Seshadri, Rashika Fernando, and Radhakrishnan Jayan	
7 Conventional Radiological Techniques and PET-CT in Treatment Response Evaluation in Post-Radiotherapy Setting	59
Stefan Vöö, Irfan Kayani, and Jamshed Bomanji	
8 Conventional Radiological Techniques and PET-CT in Treatment Response Evaluation in Immunotherapy Settings	83
Angelo Castello and Egesta Lopci	
9 Treatment Response Evaluation of Bone Metastases Using ¹⁸F-NaF	101
Kalevi Kairemo and Homer A. Macapinlac	
10 Reporting Post-Therapy Scans	119
Laura Evangelista and Lea Cuppari	

Part II Therapy Response Evaluation: Clinical Atlas

- 11 ^{18}F -FDG PET/CT in Treatment Response Evaluation in Head and Neck Cancer 131**
Pierre Lovinfosse and Roland Hustinx
- 12 PET/CT in Treatment Response Evaluation: Lung Cancer 151**
Nilendu C. Purandare, Boon Mathew, Ameya D. Puranik, Sneha Shah, Archi Agrawal, and Venkatesh Rangarajan
- 13 ^{18}F -FDG PET/CT and Non ^{18}F -FDG-PET/CT in Treatment Response Evaluation in Neuro-Oncology 159**
S. Islam, A. S. Mehdi, T. Barwick, D. J. Coope, S. Bisdas, A. D. Waldman, and G. Thompson
- 14 PET/CT in the Assessment of Treatment Response in Hepatobiliary, Gall Bladder and Pancreatic Malignancies 187**
Kanhaiyalal Agrawal, Sayak Choudhury, Arvind Suresh, Archi Agrawal, and Gopinath Gnanasegaran
- 15 ^{18}F -FDG PET/CT in Treatment Response Evaluation: Gastroesophageal Cancer 209**
Archi Agrawal, M. V. Manikandan, Nilendu C. Purandare, Sneha Shah, Ameya D. Puranik, and Venkatesh Rangarajan
- 16 PET-CT in Treatment Response Evaluation in Lymphoma 237**
Thomas Wagner
- 17 ^{18}F -FDG PET/CT in Treatment Response Evaluation: Breast Cancer 249**
Joan Duch Renom
- 18 ^{18}F -Choline, ^{68}Ga -PSMA-11 and ^{18}F -FDG PET/CT in Treatment Response Evaluation: Prostate Cancer 261**
Giulia Polverari, Alessandro Lambertini, Stefano Fanti, and Francesco Ceci
- 19 FDG PET/CT in Treatment Response Evaluation of Gynecological Malignancies 297**
Shelvin Kumar Vadi and Bhagwant Rai Mittal
- 20 [^{18}F]FDG PET/CT in Treatment Response Evaluation: Colorectal Cancer 333**
F. A. Vuijk, L. Heijmen, M. J. Roef, A. I. J. Arens, A. L. Vahrmeijer, E. L. van Persijn van Meerten, D. E. Hilling, and L. F. de Geus-Oei
- 21 ^{18}F -FDG PET in Treatment Response Evaluation: Soft Tissue Sarcomas 357**
Emanuela Palmerini, Andrea Paccagnella, and Stefano Fanti

- 22 *¹⁸F-FDG PET-CT in Treatment Response Evaluation in Cutaneous Malignant Melanoma*** 377
Sweni Shah, Salma Audi, and Malavika Nathan
- 23 *¹⁸F-FDG PET-CT in Treatment Response Evaluation: Multiple Myeloma*** 395
Cristina Nanni
- 24 *¹⁸F-FDG PET-CT and ¹⁸F-NaF in Treatment Response Evaluation: Bone Metastases and Bone Tumours*** 403
Gary J. R. Cook and Sharjeel Usmani
- 25 *FDG-PET/CT in Assessment of Treatment Response in Pediatric Lymphoma*** 419
Mateos Bogoni, Margaret Masukawa, and Juliano Julio Cerci
- 26 *¹⁸F-FDG PET/CT in Treatment Response Evaluation in Thyroid Cancer*** 439
Fahim Ul Hassan and Haseeb Ahmed
- 27 *⁶⁸Ga-DOTA PET-CT in Treatment Response Evaluation: Neuroendocrine Tumours*** 453
Valentina Ambrosini and Stefano Fanti
- 28 *¹⁸F-FDOPA PET/CT for Treatment Response Assessment*** 471
Alessio Imperiale and David Taïeb
- 29 *¹⁸F-FLT/FET PET-CT in Treatment Response Evaluation*** 481
Ameya D. Puranik and Yash Jain