Index

A
Anatomy, 4–5, 32, 35, 38, 61, 68, 78, 117, 120, 131, 133, 136, 156, 235, 237, 264–266, 328, 351

B
Biochemical and molecular biological factors
for adjuvant and systemic therapy, 45–47
radiochemotherapy, 42–44
for surgical decisions, 44–45
for treatment decisions, 41–47
Brachytherapy
clinical results, 166–167
contact x-ray 50kV (CXRT), 165–167
correlation in tailoring treatment, 167–168
elderly patient, 168–169
endoluminal, 164, 166–168
interstitial, 164, 165, 167, 168

C
Chemotherapy
biologic targeted agents, 181–188
combined EGFR and VEGF, 188
EGFR inhibitors, 182–185
upfront chemotherapy, 193–201, 213
VEGF inhibitors, 186–188
Clinical decision making, 54, 316, 342–344, 355–357
caudal border of the CTV, 152
contouring guidelines, 118
cranial border of the CTV, 150–151
CTV definition, 125
Diagnosis
height of tumour, 29, 30
imaging work-up, 10
mesorectal fascia, 29, 32, 62, 64, 67–71, 262
T-staging, 32–35

E
Electronic health record, 356–357, 359, 363
Endoanal ultrasound (EAUS), 28–29, 32, 35, 61
Epidemiology, 3, 21

F
Follow-up
distant metastases (DM), 50, 352
local recurrence (LR), 50, 51, 280, 282, 297–298, 352, 353
metachronous bowel tumours, 352–353
tumour markers, 353

I
Intraoperative radiotherapy (IORT), 118, 155–160, 166, 280–284

L
Locally advanced primary rectal cancer, 69, 155–156
Local relapse
CEA surveillance, 97
doscopy surveillance, 97
limitations in the imaging detection, 99–100
new techniques in the evaluation of local relapse, 100–101
role of CT, 98, 99
role of imaging surveillance, 97
role of MRI, 98–99, 101, 102
role of PET, 98, 100
surveillance and at what frequency, 96

D
Data sharing, 356–359, 363
Delineation
Magnetic resonance imaging (MRI)
- diffusion-weighted magnetic resonance imaging (DWI), 79–87
- dynamic contrast-enhanced MR imaging (DCE-MRI), 87–88
- extramural venous invasion (EMVI), 30–32, 200
- mesorectal fascia involvement, 69, 70
- mesorectal spread, 62–64
- pretreatment ADC value, 84–85
- qualitative assessment of DWI, 84

Metastases
- extra-hepatic disease, 36–38
- hyperthermic intraperitoneal chemotherapy (HIPEC), 213, 278
- initially unresectable metastases, 211–212
- limited peritoneal disease, 213
- liver, 37, 206, 207, 209, 210, 212–214, 352
- R0 resectable liver +/- lung metastases, 207, 209–211

Nodal metastases, 45, 73–75, 157, 166, 298, 314
Nodal staging, 36, 73–75, 157, 160, 322

Pathology
- APR grading, 311–312
- circumferential resection margin involvement, 310–311
- correct procedure for handling the specimen, 305–316
- direct tumour spread and pT stage, 309–310
- histological typing and grading, 309
- key features in the pathology report, 308–316
- local peritoneal involvement, 312
- lymph node metastases and pN stage, 314–315
- mesorectal grade, 309, 311, 312
- prognostic value of (y)pN, 319–325
- prognostic value of (y)pT, 319–325
- prognostic value of TRG, 333–337
- specimen after neoadjuvant radiotherapy, 315–316
- vascular invasion, 308–315, 323, 324, 328

Pathophysiology, 6–7

Positron emission tomography-computed tomography (PET-CT)
- early response evaluation FDG PET-CT, 89
- presurgical FDG PET-CT, 89–91
- pretreatment FDG PET-CT, 89

Prediction applications, 359–363

Preoperative long-course chemoradiotherapy
- acute and late toxicity of SCPRT and CRT, 111
- adjuvant chemotherapy, 106, 108
- biologic targeted agents, 114
- clinical trials, 109, 113, 114
- combined EGFR and VEGF, 188
- EGFR inhibitors, 182, 185
- meta-analysis, 109
- oxaliplatin, 174, 175, 177, 178
- selection of patients, 109, 113–115
- surgical procedure avoidance, 291–300
- upfront chemotherapy, 193–201
- VEGF inhibitors, 186–188

Preoperative short-course radiotherapy
- acute and late toxicity of SCPRT and CRT, 111
- clinical trials, 106–108
- meta-analysis, 108–109
- population-based data, 22, 108
- selection of patients, 109, 113–115

Prognostic clinical factors
- distance of the tumor to mesorectal fascia, 24–25
- histopathology on pretreatment biopsies, 25–26
- pretreatment laboratory findings, 26
- sex, age, and body mass index, 21–22
- tumor size and location, 22–23

Radiotherapy treatment technique
- benefits of IMRT, 132
- correcting shape variation, 141–142
- IGRT, 129–145
- patient orientation and belly board use, 136
- planning target volume margins, 139–141
- possibility of dose escalation, 143–145
- prerequisites for IMRT, 132–134
- to reduce irradiated small bowel volume, 134–138
- reduction of CTV, 136–138
- set-up errors, 133, 138, 141, 142
- target volume shape variation, 138–139

Rectal function, 5–6

Surgery
- APR grading, 311–312
- diverting stoma, 257–259
- extended resections, 275–287
- extralevator abdominoperineal excision, 261–271, 312
- laparoscopic, 30, 186, 240, 241, 245, 249–255, 267, 293, 298, 349
- nerve-sparing surgery, 233–245
- surgical procedure avoidance, 291–300

Treatment strategy
- cM1, non-synchronous, 15
- cM1, resectable synchronous metastases, 14
- cM1, unresectable synchronous metastases, 14
cT1 N0 M0, 11
Tumour heterogeneity
based on biological evidence, 50

T2 N0 M0, 11
based on clinical observation, 50–52

T3 (MRF−) N0-2 M0, 12
surrogate endpoints, 52–55

T3 (MRF+) N0-2-M0 or cT4 any N M0, 12