

INDEX

A

Abdominoperineal resection (APR), 274
Accelerated fractionation (AHF), 139
Accelerated hyperfractionated thoracic radiation therapy (AHTRT)
stage III nonsmall-cell lung cancer, 186
Accelerated repopulation, 5-6
ACE
MMPI, 381-382
Acemetacin
anthracyclines, 400
Adamlysins
MMPI, 381-382
Additivity
calculation, 12f
Adenomatous polyp, 393
Adenomatous polyposis coli (APC), 394
Adenoviral delivery systems, 351
Adenoviral *p53* gene transfer
future role, 356-357
NSCLC, 353-354
radiation therapy
NSCLC, 355-356
Adenoviral vectors
head and neck cancer, 168-169
Adriamycin
trastuzumab and cytoxan, 342
AHF, 139
AHTRT
stage III nonsmall-cell lung cancer, 186
AJCC
staging, 272t
Alternating schedule
defined, 204
American Joint Commission for Cancer (AJCC)
staging, 272t
Amino-camptothecin, 99
Anal cancer
concomitant chemoradiotherapy, 39-40
concurrent chemoradiation, 12, 13t
Anaplastic astrocytoma
chemotherapy, 134-136

Anaplastic oligodendroglioma
chemotherapy, 136-137
Anemia
radiation therapy outcome, 7
Angiogenesis, 366
COX-2, 398f
inhibitors, 344-346
Angiolytic therapy
gene therapy, 371-374
Angiostatic therapy
gene therapy, 371-374
Angiostatin, 367
Angiotensin converting enzyme (ACE)
MMPI, 381-382
Anthracyclines
NSAIDs, 400
Antiangiogenesis agents, 325-327
Antiangiogenic agents
ionizing radiation, 366-367
Anti-HER2 strategies, 341-342
APC, 394
Apoptosis, 14, 110
promoters, 332-333
radiation-induced
gemcitabine, 10
vascular endothelial cells, 365-366
APR, 274
Arachidonic acid
metabolism, 392f
Aspirin
colon cancer, 393, 399

B

Bile duct cancer, 262
extrahepatic, 262
TNM staging system, 265t
Biliary system cancer, 262-266
Bladder cancer
gemcitabine, 107
hypoxia, 7
transitional cell
incidence, 201
Bleomycin
head and neck cancer, 149, 151

- BMS-184476, 83-84
BMS-188797, 83-84
BMS-275291, 384
 chemical structure, 384f
 clinical experience, 388-389
 development issues, 389
 maximum tolerated dose, 388
 pharmacology, 385-387
- Brain tumors
 docetaxel, 77
 paclitaxel, 76-77
- Breast cancer
 gemcitabine, 107
 inflammatory
 combined modality treatment, 247
 locally advanced. *See* Locally advanced breast cancer
 taxanes, 79
- Bromodeoxyuridine (BUdR), 140
- Bronchoscopy
 fiberoptic, 198
- BUdR, 140
- C**
- Calcified gallbladder
 gallbladder cancer, 262
- Camptothecin
 antitumor agent, 93-95
 clinical pharmacology, 95-96
 esophageal cancer, 100
 gastric cancer, 100
 radiation interaction, 96-97
 radiation sensitization, 93-101
- Cancer and Leukemia Group B (CALGB)
 small-cell lung carcinoma, 207
 stage III nonsmall-cell lung cancer, 185
- Cancer drugs
 discovery and development, 379-389
- Capecitabine (Xeloda), 25, 35-36
 radiation therapy, 37
- Captopril
 MMPI, 381-382
- Carboplatin, 56
 head and neck cancer, 151-152
 and radiation
 gynecological cancer, 311-312
- Carmustine
 Lewis lung carcinoma, 400
- CDKs, 331
- Celecoxib, 394
 COX, 401-403
- Cell cycle
 inhibitors, 330-332
 redistribution, 29-30
- Cell loss factor, 5
- Cement workers
 pancreatic cancer, 258
- Cervical cancer
 cisplatin/radiation therapy, 306-310
 concurrent therapy, 307-310
 sequential therapy, 307
 concurrent chemoradiation, 12, 13t
 hypoxia, 6-7
 platinum complexes, 54-56
- Chemoradiation, 3-10
 biology complicating delivery, 4-7
 improved therapeutic ratio, 11-14
 integration, 8-9
 molecular level, 14-16
 new molecularly targeted agents, 16-18
 preclinical studies, 10-11
 treatment paradigms, 4
- Chemoradiotherapy trials
 concomitant split-course
 head and neck cancer, 156-157
- Chemotherapy
 biology complicating delivery, 7-8
 resistance
 mechanisms associated, 8t
 synergistic cytotoxic activity
 with radiation therapy, 146-148
 toxicities, 147
- CHFX
 head and neck cancer, 167
- Cholelithiasis
 gallbladder cancer, 262
- Chronomodulation
 colorectal cancer, 286
- Cigarette smoking
 pancreatic cancer, 258
- Cisplatin
 adenoviral *p53* gene transfer, 353
 cervical cancer, 54-56
 characterization, 49-50
 head and neck cancer, 52-53, 149, 151-152
 Lewis lung carcinoma, 400
 lung cancer, 53-54
 radiosensitization, 48
 small-cell lung carcinoma, 207
 stage III nonsmall-cell lung cancer, 185-190
 vulvar cancer, 315-317

- Cisplatin-FHX (CHFX)
head and neck cancer, 167
- Cisplatin/fluorouracil
head and neck cancer, 154-156, 160
Veterans Affairs Laryngeal Study, 159-161
- Cisplatin/fluorouracil/radiation
RTOG, 310
- Cisplatin/methotrexate/vinblastine (CMV)
muscle-invasive bladder cancer, 293
- Cisplatin/methotrexate/vinblastine/doxorubicin (M-VAC)
muscle-invasive bladder cancer, 293
- Cisplatin/paclitaxel
gynecological cancer, 311
- Cisplatin/radiation therapy
cervical cancer, 306-310
gynecological cancer, 306-310
- Cisplatinum, 3
- CMV. *See* Cisplatin/methotrexate/vinblastine (CMV); Cytomegalovirus
- Coal mining
gastric cancer, 254
- Colorectal cancer, 271-286
adjuvant therapy, 273-274
biology, 271-272
chemotherapy, 273
chronomodulation, 286
COX-2, 395f
epidemiology, 271-272
future trends, 285-286
novel chemotherapeutic agents, 285-286
oxaliplatin, 56
prognosis, 286
radiation therapy, 273-274
staging, 272t
- COX. *See* Cyclooxygenase (COX)
- CPT-11. *See* Irinotecan (CPT-11)
- Cushing's syndrome, 198
- Cyclin-dependent kinases (CDKs), 331
- Cyclooxygenase (COX)
celecoxib, 401-403
pathway, 392-393
- Cyclooxygenase-1 (COX -1)
role, 393f
- Cyclooxygenase-2 (COX-2), 16, 324-325, 391-404
angiogenesis, 398f
cancer, 393-395
colorectal cancer, 395f
- Cyclooxygenase-2 (COX-2)
inhibitors
cancer prevention, 399-400
chemotherapeutic agents, 400-401
combined treatment, 401-403
future, 404
radiation, 400-401
mechanisms, 395-398
prostaglandins, 396f
role, 393f
tumor expression, 394f
- Cyclophosphamide, 3
Lewis lung carcinoma, 400
small-cell lung carcinoma, 200
- Cytochrome C, 332
- Cytomegalovirus (CMV), 351
- Cytotoxicity
fluoropyrimidine-mediated
radiation potentiation, 30
- Cytosin
adriamycin and trastuzumab, 342
- D**
- Daunorubicin
NSAIDs, 400
- Diet
colorectal cancer, 271
gastric cancer, 254
pancreatic cancer, 258
- DNA
FdUTP incorporation, 30
(MMR), 49
repair
mechanisms, 15
- DNA damage
radiation-induced
repair, 6
- Docetaxel (Taxotere), 4
brain tumors, 77
chemical structure, 66f
esophageal cancer, 226-227
fractionated radiotherapy, 70
genitourinary cancer, 77
head and neck cancer, 83, 152-153
non-small-cell lung cancer, 74-75
pharmacology, 67-68
radiosensitizing abilities, 70-71
- Dose volume histograms (DVH), 4, 5f
- Doxorubicin, 3
adenoviral *p53* gene transfer, 353
M-VAC
muscle-invasive bladder cancer, 293
NSAIDs, 400
- DVH, 4, 5f

E

Eastern Cooperative Oncology Group (ECOG)
gemcitabine, 294
stage III nonsmall-cell lung cancer, 184

Eaton-Lambert syndrome, 198

EGFR, 17
endothelial cell viability, 362-363
molecular targeting, 329

Endonuclease
activation, 28

Endothelial cell
repair, 369-370
viability
growth factors, 362-363

Environment
gastric cancer, 254
pancreatic cancer, 258

EORTC. *See* European Organization for the Research and Treatment of Cancer (EORTC)

Epidermal growth factor receptor (EGFR), 17
endothelial cell viability, 362-363
molecular targeting, 329

Epidermal growth factor receptor family
targeting, 340-341

Epiphyseal growth rate
rat, 387f

Epirubicin
NSAIDs, 400

Epirubicin/radiation therapy
gynecological cancer, 311

Esophageal cancer
brachytherapy, 226
camptothecin, 100
chemoradiation, 215-231
concomitant chemoradiotherapy, 37-38
external beam radiation, 226
future, 228-229
intensified neoadjuvant chemotherapy
intensified chemoradiotherapy,
225-226
newer agents, 226-228
nonsurgical approaches, 224-226
paclitaxel, 80-81
postoperative chemoradiation, 223-224
postoperative chemotherapy, 220-221
preoperative chemoradiation, 221-223
preoperative radiation alone, 218-219
radiation alone, 217-218
vs. chemoradiotherapy, 224-225

radiation therapy techniques, 229-231
beam arrangement, 229-231
normal tissue tolerances, 231
portals, 229-231
treatment planning, 231
volumes, 229-231

staging, 217t

surgery alone, 216-217

surgical approaches, 218-224

Etoposide
small-cell lung carcinoma, 207

European Organization for the Research and Treatment of Cancer (EORTC)
esophageal cancer, 222
hypopharyngeal cancer, 159
oropharyngeal carcinoma, 147
small-cell lung carcinoma, 207
stage III nonsmall-cell lung cancer, 181

Extrahepatic bile duct cancer, 262

F

Familial adenomatous polyposis (FAP), 393

Farnesylation inhibitors, 329-330

Fiberoptic bronchoscopy, 198

Floxuridine
radiosensitization, 24f
structure, 25f

Fluorinated pyrimidines
esophageal cancer, 228-229

Fluoropyrimidine, 23-40
biomodulation, 27
DNA-directed efforts, 26
efficacy, 25
metabolism, 26f
pharmacology, 25-26
radiation interactions, 27-28
radiosensitization
mechanisms, 28-30
pharmacological requirements, 30-33
RNA-directed efforts, 26

Fluoropyrimidine-induced radiosensitization
clinical indications, 37-40

Fluoropyrimidine-mediated cytotoxicity
radiation potentiation, 30

5-fluorouracil, 3
adenoviral *p53* gene transfer, 353
administration cyclicity, 33
head and neck cancer, 149-150
recurrent, 164
oral forms, 34-36
oxaliplatin, 56
p53, 33-34

- pharmacology, 30-31
- radiation fractionation scheme, 33
- radiation integration, 31-33
- radiosensitization, 27f
 - efficacy, 24
 - factors affecting, 94t
 - gene therapy, 34
- rectal cancer, 100-101
- scheduling, 31
- structure, 25f
- 5-fluorouracil/cisplatin
 - head and neck cancer, 150, 154-156
 - Veterans Affairs Laryngeal Study, 159-161
- 5-fluorouracil/hydroxyurea/radiotherapy
 - head and neck cancer, 156
- 5-fluorouracil/mitomycin-C
 - gynecological cancer, 314
 - vulvar cancer, 315-316
- 5-fluorouracil/radiation
 - LABC, 239-241
 - pancreatic cancer, 262
- 5-fluorouracil/radiation therapy
 - gynecologic cancer, 310-311
- Flurbiprofen, 397
- Fractionated radiotherapy
 - docetaxel, 70
 - small-cell lung carcinoma, 202
- Futile-repair hypothesis, 27-28
- G**
- Gallbladder
 - calcified
 - gallbladder cancer, 262
- Gallbladder cancer, 262-266
 - clinical manifestations, 263
 - etiology, 262
 - pathology, 263
 - prognosis, 263
 - risk factors, 262
 - staging, 263
 - TNM staging system, 264t
 - treatment, 263-266
- Gardeners
 - pancreatic cancer, 258
- Gastric cancer
 - adjuvant therapy, 257
 - camptothecin, 100
 - clinical manifestations, 254
 - combined modality therapy, 253-257
 - diagnosis, 254
 - epidemiology, 253-254
 - etiology, 254
 - pathology, 254
 - preoperative therapy, 256-257
 - prognosis, 254-255
 - risk factors, 254
 - screening, 254
 - staging, 254-255
 - surgery, 256
 - TNM staging system, 255t
 - treatment, 255-256
 - UFT, 35
- Gastroesophageal adenocarcinoma
 - postoperative chemoradiation, 223-224
- Gastrointestinal cancer
 - gemcitabine, 119-122
 - paclitaxel, 79-81
 - taxanes, 79-81
- Gemcitabine, 4, 105-122
 - clinical efficacy, 107
 - early clinical experience, 112
 - gastrointestinal cancer, 119-122
 - head and neck cancer, 117-119, 153
 - lung cancer, 113-117
 - metabolism, 106f
 - muscle-invasive bladder cancer, 293
 - nonsmall-cell lung cancer, 113-117
 - ongoing clinical experience, 112-122
 - pancreatic cancer, 119-122, 261
 - pharmacology, 105-107
 - preclinical data, 108-112
 - radiation-induced apoptosis, 10
- Gene therapy
 - angiolytic therapy, 371-374
 - angiostatic therapy, 371-374
 - 5-fluorouracil, 34
 - head and neck cancer, 168-169
- Gene transfer
 - techniques, 351
- Genitourinary cancer
 - docetaxel, 77
 - paclitaxel, 78
- GOG, 306
- Gynecologic cancer, 303-317
 - administration, 312-313
 - carboplatin/radiation, 311-312
 - chemoradiation
 - compliance, 313-314
 - complications, 314
 - disease stage, 314-315
 - duration, 313-314
 - cisplatin/radiation therapy, 306-310
 - drug dose, 312-313

- epirubicin/radiation therapy, 311
 fluorouracil/radiation therapy, 310-311
 hydroxyurea/radiation therapy, 304-306
 mitomycin-C and radiation therapy,
 311-312
 NCIC, 310
 paclitaxel/cisplatin, 311
 schedule, 312-313
 taxanes, 78-79
 Gynecologic Oncology Group (GOG), 306
- H**
- HART**
 stage III nonsmall-cell lung cancer, 185
- Head and neck cancer**
 alternating chemoradiotherapy, 157
 cisplatin/5-FU, 160
 combination chemotherapy
 vs. radiation alone, 154-155
 combined modality chemoradiation
 schedules
 variations, 156-158
 combined modality strategies, 145-170
 concomitant chemoradiotherapy, 149-157
 docetaxel, 83
 gemcitabine, 117-119
 hypoxia, 6-7
 incidence of, 145
 induction chemotherapy, 158-161
 meta-analyses, 161-162
 multiagent concomitant treatment, 154-156
 new agents, 167-168
 organ preservation, 158-161
 paclitaxel, 81-82
 platinum complexes, 52-53
 recurrent disease
 treatment, 163-167
 RTOG, 147, 151
 sequential vs. concomitant
 chemoradiotherapy, 158
 supportive care, 169-170
 UFT, 35
- Helicobacter pylori*
 gastric cancer, 254
- HER1**
 clinical trials, 342-344
- Herceptin. *See* Trastuzumab (Herceptin)
- Hydroxyurea**
 gynecological cancer
 radiation therapy, 304-306
 head and neck cancer, 149
 5-fluorouracil and radiotherapy, 156
 recurrent, 164
- Hyperfractionated accelerated radiation
 therapy (HART)**
 stage III nonsmall-cell lung cancer, 185
- Hyperfractionated radiotherapy, 139**
 brain metastases, 14
 rationale, 6
 small-cell lung carcinoma, 202
- Hypopharyngeal cancer**
 EORTC, 159
- I**
- IAP, 365**
- IASLC**
 small-cell lung carcinoma, 198
 stage III nonsmall-cell lung cancer, 184
- IBC**
 combined modality treatment, 247
- Ideal radiosensitizer, 9-10**
- Ifosfamide**
 head and neck cancer, 149
 small-cell lung carcinoma, 207
- IMRT, 146**
- Indomethacin**
 anthracyclines, 400
- Inflammatory breast cancer (IBC)**
 combined modality treatment, 247
- Inhibitors of apoptosis (IAP), 365**
- Intensity modulated radiation therapy
 (IMRT), 146**
- International Association for the Study of
 Lung Cancer (IASLC)**
 small-cell lung carcinoma, 198
 stage III nonsmall-cell lung cancer, 184
- Ionizing radiation**
 antiangiogenic agents, 366-367
 medical uses, 3
 tumor blood vessels, 360
- Irinotecan (CPT-11), 4, 93-94, 98-99**
 adenoviral *p53* gene transfer, 353
 colorectal cancer, 285
 esophageal cancer, 229
 head and neck cancer, 153-154
 recurrent, 164
 lung cancer, 99-100
 radiation sensitization
 factors affecting, 94t
 rectal cancer, 100-101
- Isobologram, 11**
- Isocoumarin, 366**

J

Japanese Clinical Oncology group
small-cell lung carcinoma, 204

L

LABC. *See* Locally advanced breast cancer
(LABC)

Leather tanners

pancreatic cancer, 258

Leucovorin

colorectal cancer, 285

Lewis lung carcinoma, 326

NSAIDs, 400

Locally advanced breast cancer (LABC)

combined modality therapy, 237-248

concurrent chemoradiation, 239-242

concurrent 5-FU and radiation, 239-241

future studies, 244-247

neoadjuvant chemotherapy, 238-239

paclitaxel/radiation, 242

pathological response, 243-247

sequential therapy, 238-239

taxanes/radiation, 241-242

LSCSG

stage III non-small-cell lung cancer,
178-179

Lung cancer

CPT-11, 99-100

gemcitabine, 107, 113-117

genetic basis, 350-351

Lewis, 326

NSAIDs, 400

non-small-cell. *See* Non-small-cell lung
cancer

NSAIDS

anthracyclines, 400

platinum complexes, 53-54

small-cell. *See* Small-cell lung carcinoma

stage III non-small-cell. *See* Stage III

non-small-cell lung cancer

Lung Cancer Study Group (LSCSG)

stage III non-small-cell lung cancer, 178-179

M

MACH-NC, 161

Malignant gliomas, 129-142

chemotherapy, 131-133

novel chemotherapy, 139-141

radiation therapy, 130-131, 137-139

recursive partitioning analysis, 133-134

surgery, 130-131

MAPK, 327

Marimastat

chemical structure, 384f

maximum tolerated dose, 388

Massachusetts General Hospital

muscle-invasive bladder cancer, 296-297

Matrigel plug assay, 386f

Matrix metalloproteinase inhibitors

(MMPi), 379-383

maximizing, 381-383

Medical Research Council (MRC) study

stage III non-small-cell lung cancer,
178-179

Mefenamic acid

anthracyclines, 400

Membrane secretases

MMPI, 381-382

Mercaptoamide, 383

Meta-Analysis of Chemotherapy in Head
and Neck Cancer (MACH-NC), 161

Metastatic disease

taxanes, 83

Methotrexate

CMV

muscle-invasive bladder cancer, 293

head and neck cancer, 149

Mismatch repair (MMR)

DNA, 49

Mitogen-activated protein kinase (MAPK),
327

Mitomycin-C

and fluorouracil

gynecological cancer, 314

vulvar cancer, 315-316

and 5-fluorouracil

gynecological cancer, 314

vulvar cancer, 315-316

head and neck cancer, 149, 150

and radiation therapy

gynecological cancer, 311-312

MMPi, 379-383

MMR

DNA, 49

Modified Astler-Coller Staging

staging, 272t

Molecular targeted agents, 323-333

MRC study

stage III non-small-cell lung cancer,
178-179

Muscle-invasive bladder cancer

chemoradiotherapy, 291-299

- chemotherapy, 293-294
 clinical staging
 inaccuracy, 295-296
 Massachusetts General Hospital, 296-297
 radiotherapy, 292-293
 RTOG 88-02, 297-298
 RTOG 89-03, 298-299
 surgery, 201-202
 TURBT, 294-295
- M-VAC
 muscle-invasive bladder cancer, 293
- N**
- National Cancer Institute of Canada Clinical Trials Group (NCIC)
 gynecologic cancer, 310
- National Surgical Adjuvant Breast and Bowel Project (NASABP), 273
- NCCTG
 rectal cancer, 275-276
 stage III nonsmall-cell lung cancer, 186
- NCIC
 gynecologic cancer, 310
- Nickel processing
 gastric cancer, 254
- Nimesulide, 400
- 9-nitro-camptothecin, 99
- Nitrogen mustard, 3
- Nitroimidazole compounds
 head and neck cancer, 150
- Nonsmall-cell lung cancer (NSCLC)
 adenoviral p53 gene therapy, 349-357
 docetaxel, 74-75
 gemcitabine, 113-117
 mortality of, 175
 paclitaxel, 72-74
 p53 gene transfer, 352-353
 UFT, 35
- Nonsteroidal antiinflammatory agents (NSAIDs)
 colon cancer, 393
 colorectal cancer, 271
 Lewis lung carcinoma, 400
- Normal tissue
 protection, 9
- North Central Cancer Treatment Group (NCCTG)
 rectal cancer, 275-276
 stage III nonsmall-cell lung cancer, 186
- Novel targets
 head and neck cancer, 168
- Novel taxanes, 83-84
- NSAIDs. *See* Nonsteroidal antiinflammatory agents (NSAIDs)
- NSCLC. *See* Nonsmall-cell lung cancer (NSCLC)
- Nucleotide pool perturbations, 28-29
- O**
- Obstructive jaundice
 pancreatic cancer, 259
- Occupational exposure
 gastric cancer, 254
 pancreatic cancer, 258
- Oropharyngeal carcinoma
 EORTC, 147
- Orzel, 35-36
 radiation therapy, 35
- Ovarian cancer
 chemoradiation, 317
 gemcitabine, 107
- Oxaliplatin, 56
 colorectal cancer, 286
 esophageal cancer, 229
 5-fluorouracil, 56
- P**
- p53, 16
 5-fluorouracil, 33-34
 gene, 350
 gene transfer retroviral
 NSCLC, 352-353
- Paclitaxel (Taxol), 4, 140
 adenoviral p53 gene transfer, 353
 brain tumors, 76-77
 chemical structure, 66f
 and cisplatin
 gynecological cancer, 311
 esophageal cancer, 80-81, 226-228
 gastric cancer, 257
 gastrointestinal cancer, 79-81
 genitourinary cancer, 78
 head and neck cancer, 81-82, 152-153, 157
 recurrent, 163-164
 muscle-invasive bladder cancer, 293
 nonsmall-cell lung cancer, 72-74
 pharmacology, 67-68
 and radiation
 LABC, 242
 radiosensitizing abilities, 68-70
 small-cell lung carcinoma, 75-76
- Pancreatic cancer, 258-262

- clinical manifestations, 258-259
 - concomitant chemoradiotherapy, 38
 - epidemiology, 258
 - etiology, 258
 - 5-fluorouracil, 24
 - gemcitabine, 107, 119-122
 - pathology, 258
 - postoperative therapy, 260-261
 - preoperative therapy, 261-262
 - prognosis, 259
 - risk factors, 258
 - staging, 259
 - surgery, 259-260
 - TNM staging, 260t
 - treatment, 259
 - UFT, 35-36
 - Paraneoplastic syndromes, 198
 - PCI
 - small-cell lung carcinoma, 200, 207-208
 - PKC, 17-18
 - Platinum complexes, 47-56
 - biochemistry, 47-49
 - cervical cancer, 54-56
 - chemistry, 47-49
 - head and neck cancer, 52-53
 - lung cancer, 53-54
 - prostate cancer, 56
 - radiosensitization, 49-51
 - vulvar cancer, 56
 - Platinum resistance
 - mechanisms, 48-49
 - Postoperative chemoradiation
 - esophageal cancer, 223-224
 - gastroesophageal adenocarcinoma, 223-224
 - Postoperative chemotherapy
 - esophageal cancer, 220-221
 - stage III nonsmall-cell lung cancer, 179
 - Postoperative radiation therapy
 - stage III nonsmall-cell lung cancer, 178-179
 - Postoperative therapy
 - pancreatic cancer, 260-261
 - Power Doppler sonography, 360-361
 - Preoperative chemoradiation
 - esophageal cancer, 221-223
 - stage III nonsmall-cell lung cancer, 182-185
 - Preoperative chemotherapy
 - stage III nonsmall-cell lung cancer, 181
 - Preoperative radiation
 - esophageal cancer, 218-219
 - Preoperative radiation therapy
 - stage III nonsmall-cell lung cancer, 181
 - Preoperative therapy
 - gastric cancer, 256-257
 - pancreatic cancer, 261-262
 - Primary sclerosing cholangitis
 - bile duct cancer, 262
 - Prinomastat
 - maximum tolerated dose, 388
 - Programmed cell death, 14, 110
 - Prophylactic cranial irradiation (PCI)
 - small-cell lung carcinoma, 200, 207-208
 - Prostaglandins, 392-393
 - COX-2, 396f
 - Prostate cancer
 - platinum complexes, 56
 - Protein kinase C (PKC), 17-18
- ## R
- Radiation
 - carboplatin
 - gynecological cancer, 311-312
 - cisplatin and fluorouracil
 - RTOG, 310
 - 5-fluorouracil
 - LABC, 239-241
 - pancreatic cancer, 262
 - Radiation enhancement
 - nature, 9t
 - Radiation-induced apoptosis
 - gemcitabine, 10
 - Radiation-induced DNA damage
 - repair, 6
 - Radiation therapy
 - adenoviral p53 gene transfer
 - NSCLC, 355-356
 - and cisplatin
 - cervical cancer, 306-310
 - 5-fluorouracil
 - gynecologic cancer, 310-311
 - and mitomycin-C
 - gynecological cancer, 311-312
 - outcome
 - anemia, 7
 - Radiation Therapy Oncology Group (RTOG)
 - 88-02
 - muscle-invasive bladder cancer, 297-298
 - 89-03
 - muscle-invasive bladder cancer, 298-299
 - cisplatin, 151a
 - cisplatin/fluorouracil/radiation, 310

- head and neck cancer, 147, 151
- pancreatic cancer, 262
- stage III nonsmall-cell lung cancer, 184, 185, 187-188
- Radiosensitization
 - fluoropyrimidine-induced
 - clinical indications, 37-40
 - traditional thoughts, 10f
- Radiosensitizer
 - ideal, 9-10
- Radiotherapy
 - 5-fluorouracil/hydroxyurea
 - head and neck cancer, 156
- Ras farnesylation inhibitors, 329-330
- Rat epiphysial growth rate, 387f
- Receptor tyrosine kinase antagonists
 - radiation, 367-369
- Receptor tyrosine kinases, 339-346
 - malignancy, 340
- Rectal cancer. *See also* Colorectal cancer
 - adjuvant therapy, 274-285, 283-285
 - concomitant chemoradiotherapy, 39
 - 5-fluorouracil, 24, 100-101
 - irinotecan, 100-101
 - local excision, 283-285
 - postoperative therapy, 275-278
 - preoperative therapy, 278-283
 - preoperative vs. postoperative radiation therapy, 279t
 - UFT, 37
- Reirradiation
 - head and neck cancer
 - recurrent, 164, 165t
- Retroviral *p53* gene transfer
 - NSCLC, 352-353
- RTOG. *See* Radiation Therapy Oncology Group (RTOG)
- Rubber processing
 - gastric cancer, 254
- Rubetecan, 93-94
- S**
- SCLC. *See* Small-cell lung carcinoma (SCLC)
- Sensitization
 - biological mechanisms, 18f
- Signal transduction inhibitors, 327-329
- SLDR, 6
- Small-cell lung carcinoma (SCLC)
 - biology, 198
 - combined modality treatment, 198-210
 - concurrent chemoradiation, 12-13
 - diagnosis, 198
 - new chemotherapeutic agents, 207-209
 - paclitaxel, 75-76
 - pathology, 198
 - radiation treatment, 198-201, 201-210
 - chemotherapy combination, 203-207
 - dose, 201-202
 - volume, 202-203
 - staging, 198
- Smoking
 - pancreatic cancer, 258
- Soft tissue sarcomas
 - hypoxia, 7
- Southwest Oncology Group (SWOG)
 - gynecologic cancer, 310
 - small-cell lung carcinoma, 203-204
 - stage III nonsmall-cell lung cancer, 182-185, 189
- Spatial cooperation, 8
- Squamous cell head and neck cancer
 - cisplatin, 151
- Stage III nonsmall-cell lung cancer
 - ChT and concurrent chemoradiation, 188-189
 - combined chemoradiation
 - cost utility, 189
 - combined modality therapy, 175-190
 - concurrent chemoradiation and consolidative ChT, 189
 - inoperable
 - chemoradiation alone, 185-190
 - concurrent chemoradiation, 186-188
 - neoadjuvant therapy, 180
 - postoperative chemotherapy or chemoradiation, 179
 - postoperative radiation therapy, 178-179
 - preoperative chemoradiation, 182-185
 - preoperative chemotherapy, 181
 - preoperative radiation therapy, 181
 - radiation therapy alone, 176-177
 - subsets, 180t
 - surgery alone, 177-178
- Stone miners
 - pancreatic cancer, 258
- Sublethal damage repair (SLDR), 6
- Sulindac, 400f
 - anthracyclines, 400
- Supraadditivity, 11
- SWOG. *See* Southwest Oncology Group (SWOG)
- Synergism, 11

T

Taxanes, 65–84. *See also* BMS
breast cancer, 79
chemical structure, 66f
clinical application, 71-72
esophageal cancer, 226-227
gynecological cancer, 78-79
head and neck cancer, 149, 152-153
metastatic disease, 83
novel, 83-84
pharmacology, 67-68
radiosensitizing abilities, 68-71

Taxanes/radiation
LABC, 241-242

Taxol. *See* Paclitaxel (Taxol)

Taxotere. *See* Docetaxel (Taxotere)

Temozolomide, 141

Teniposide
NSAIDs, 400

Textile workers
pancreatic cancer, 258

Timber processing
gastric cancer, 254

Tirapazimine, 140
head and neck cancer, 167-168

TNF gene therapy
vascular obliteration, 372-374

TNM staging
gastric cancer, 255t
pancreatic cancer, 260t

Tolmetin
anthracyclines, 400

Topoisomerase I
inhibition, 94

Topotecan, 98

Total mesorectal excision, 277-278

Toxicity independence, 8-9

Transitional cell carcinoma
bladder
incidence, 201

Transurethral resection (TRUBT), 291

Trastuzumab (Herceptin), 328
adriamycin and cytoxan, 342
esophageal cancer, 229
safety, 341

Trastuzumab/paclitaxel, 342

TRUBT, 291

Tumor blood vessels
ionizing radiation, 360
VEGF antagonist gene therapy,
371-372

Tumor hypoxia, 6-7
targeting, 15-16

Tumor microvasculature, 359-374

Tumor necrosis factor (TNF) gene therapy
vascular obliteration, 372-374

Tumor response
enhancement, 9

Tumor vascular window model, 360-362

Tyrosine kinase antagonists
receptor
radiation, 367-369

Tyrosine kinases
receptor, 339-346
malignancy, 340

U

Uracil:tegafur (UFT), 25, 35
gastric cancer, 35

V

Vaginal cancer
chemoradiation, 315

VALG
small-cell lung carcinoma, 197, 200

Vascular endothelial cells
apoptosis, 365-366

Vascular endothelial growth factor (VEGF),
17, 344-345
antagonist gene therapy
tumor blood vessels, 371-372
endothelial cell viability, 362-365
head and neck cancer, 168

Vascular obliteration
TNF gene therapy, 372-374

VEGF. *See* Vascular endothelial growth
factor (VEGF)

Veterans Administration Lung Group
(VALG)
small-cell lung carcinoma, 197, 200

Veterans Affairs Laryngeal Study
cisplatin/5-FU, 159-161
organ preservation, 163

Vinblastine
CMV
muscle-invasive bladder cancer, 293

Vincristine
NSAIDs, 400

Vinorelbine, 4

VP-16
NSAIDs, 400

Vulvar cancer
chemoradiation, 315-316

-
- cisplatin, 315-317
 - mitomycin C and fluorouracil, 315-317
 - platinum complexes, 56
 - W**
 - Wilms' tumor
 - concurrent chemoradiation, 14, 15t
 - Wortmannin, 366
 - Wound angiogenesis assay, 388
 - X**
 - Xeloda. *See* Capecitabine
 - Z**
 - Zomepirac
 - anthracyclines, 400