

# Index

---

## A

- Adjuvant systemic therapy, 137–139, 145–150, 166–169, 232
  - chemotherapy, 145–150, 232
  - hormonal therapy, 166–169, 232
  - radiation therapy and, 137–139
- Antiangiogenic therapy, 326–328
  - angiogenic peptides, 327
  - basement membrane of vessels, 327
  - endothelial cell proliferation, 327
  - extracellular matrix proteins, 327
  - natural angiogenesis inhibitors, 327
- Ataxia telangiectasia, 15
- Autologous stem cell transplantation, 313–324
  - adjuvant therapy followed by, 321–322
  - future directions, 318–320, 322–323
  - high risk patients and, 320–323
  - history of, 314–315, 320
  - induction chemotherapy followed by, 315–317
  - introduction, 313
  - metastatic disease and, 314–319
  - tandem transplant, 317–318
- Axillary adenopathy, 227–234
  - adjuvant therapy, 232
  - axillary dissection, 232
  - breast conserving therapy, 231–232
  - evaluation, 227–230
  - mastectomy, 230–231
  - prognosis, 232
- Axillary node dissection, 285–294
  - history, 285–286
  - primary tumor characteristics and, 287–288

- radiologic evaluation, 288
- sentinel lymph node mapping and biopsy, 289
- staging, 286–287
- therapeutic value, 290–291

## B

- BRCA1/BRCA2*, 12–14, 198–205
- Breast biopsy, 71–80, 90–91
  - advanced breast biopsy instrumentation (ABBI), 75–76
  - core needle biopsy, 72–75, 91
  - excisional, 76–79
  - fine needle aspiration, 72–75, 90–91, 236
  - incisional, 76
  - nipple discharge, 79
  - nonpalpable lesions, 73–78, 91
  - palpable masses, 72–73, 76–78
  - stereotactic biopsy, 73–75, 91
- Breast conservation without radiation therapy, 273–283
  - ductal carcinoma *in situ* (DCIS), 276–279
  - invasive/infiltrating cancer, 280–282
  - lobular carcinoma *in situ* (LCIS), 274–275
- Breast conserving surgery, 89–97
  - axillary adenopathy and, 231–232
  - cystosarcoma phylloides, 95
  - ductal carcinoma *in situ* (DCIS), 89–91, 95
  - invasive cancer, 92–93, 95
  - lobular carcinoma *in situ* (LCIS), 91

From: *Current Clinical Oncology:*  
*Breast Cancer: A Guide Detection and Multidisciplinary Therapy*  
Edited by: M. H. Torosian © Humana Press Inc., Totowa, NJ

- locally advanced cancer, 92–93
- lumpectomy and axillary dissection, 93–94
- neoadjuvant chemotherapy and, 95
- Paget's disease, 96
- radiation therapy, 95
- regional cancer, 92–93
- sentinel lymph node biopsy, 94
- without radiation therapy, 273–283
- Breast imaging, 19–69
  - computerized axial tomography (CT scan), 288
  - magnetic resonance imaging (MRI), 59–60, 229, 288
  - mammography, 10–11, 19–50, 62–67, 90–91, 228–229, 236
    - diagnostic, 21–22
    - digital, 62–67
    - screening, 19–21
  - positron emission tomography (PET), 229–230, 288
  - sestamibi scan, 61–62
  - ultrasound, 50–59, 91, 236
- C**
- Chemotherapy, 145–159
  - adjuvant, 145–150
  - metastatic disease, 150–153
  - primary, 213–226
  - secondary malignancy and, 157
  - toxicity, 153–159
    - acute, 153–159
    - long-term, 156–157
- Clinical classifications of breast cancer, 81–88
  - ductal carcinoma *in situ* (DCIS), 83–84
    - inflammatory cancer, 85–86
    - invasive/infiltrating cancer, 82–83
    - lobular carcinoma *in situ* (LCIS), 86–87
  - microinvasive carcinoma, 84–85
  - Paget's disease, 85
- Core needle biopsy, 72–75, 91
- Cowden's disease, 14–15
- Cystosarcoma phylloides, 95, 264–265
- D**
- Digital mammography, 62–67
- Ductal carcinoma *in situ* (DCIS), 83–84, 89–90, 95, 169, 276–279
- E**
- Epidemiology, 3–18
  - age, 3–4
  - benign breast disease, 9–10
  - diet, 7–9
  - environmental factors, 11–12
  - ethnicity, 4–5
  - genetic factors, 12–15
  - geography, 5
  - hormonal risk factors, 5–7
  - mammography, 10–11
  - occupational factors, 11
  - race, 4–5
  - radiation exposure, 9
- F**
- Fine needle aspiration, 72–75, 90–91, 236
- G**
- Gene therapy, 328–331
  - autologous transportation and, 330–331
  - immune response and, 329–330
  - signaling pathways and, 328–329
- H**
- Hormonal therapy, 161–174, 188
  - adjuvant, 166–169
  - chemoprevention, 170–172
  - ductal carcinoma *in situ* (DCIS), 169
  - future directions, 172
  - male breast cancer and, 188
  - metastatic disease and, 161–166
  - postmenopausal, 162–165
  - premenopausal, 165–166
- I**
- Immunotherapy, 325–342
  - adoptive immunotherapy, 331–339
    - allogenic cell, 332–333
    - antigen-specific 336–337
    - IL-2/LAK cell, 332
    - mucin-specific, 337–338
    - novel carbohydrate antigens, 338

- TALL-104 cells, 333–336
  - tumor infiltrating lymphocytes (TILs), 331–332
- antiangiogenic therapy, 326–328
- gene therapy and, 328–331
- growth factor receptor inhibition, 325–326
- Inflammatory breast cancer, 85–86
- Internal mammary lymph nodes, 295–311
  - age of patient, 302
  - axillary metastasis and, 298–300
  - biopsy of, 308
  - history, 295–296
  - lymphatic drainage to, 296–297
  - predictors of metastasis, 297–302
  - primary tumor characteristics, 300–302
    - biologic factors, 302
    - histology, 302
    - location, 300–301
    - size, 302
  - prognosis, 302
  - radiation therapy, 305–307
  - recurrence in, 307–308
  - surgical dissection of, 303–305
- Invasive/infiltrating cancer, 82–83, 89–90, 95, 280–282
- L**
- Li-Fraumeni syndrome, 14
- Lobular carcinoma *in situ* (LCIS), 86–87, 91, 274–275
- Locally advanced breast cancer, 85, 92–93
- Local–regional recurrence, 245–254
  - axillary recurrence, 251–252
  - breast conserving therapy and, 246–249
  - incidence, 245
  - mastectomy and, 249–251
- M**
- Magnetic resonance imaging (MRI), 59–60, 229, 288
- Male breast cancer, 183–191
  - chemotherapy, 188
  - evaluation, 184–186
  - histology, 186–187
  - hormonal therapy, 188
  - prevalence, 183
  - prognosis, 188–190
  - radiation therapy and, 187–188
  - risk factors, 184
  - surgery, 187
- Mammography, 10–11, 19–50, 62–67, 90–91, 228–229, 236
  - additional views, 21–22
  - assessment categories, 30–31
  - BI-RADS, 23–31
  - breast cancer patient, evaluation of, 45–50
  - breast tissue type, 25–26
  - calcifications, 40–45
    - benign, 40–44
    - malignant, 40–42, 45
  - diagnostic, 21–22
    - additional views, 21–22
  - digital, 62–67
  - masses, 33–40
    - benign, 33–37
    - malignant, 33–34, 37–40
  - normal breast, 32–33
  - screening, 19–21
    - standard views, 20–21
  - significant findings, 26–30
  - standard views, 20–21
- Mastectomy, 99–109
  - history, 99–100
  - indications, 100–101
  - local regional recurrence, 249–251
  - male breast cancer, 187
  - modified radical mastectomy, 104–107
  - radical mastectomy, 107
  - skin-sparing mastectomy, 107–108
  - total mastectomy, 101–104
- Metastatic disease, 141–142, 150–153, 161–166, 175–182
  - brain, 178–180
  - liver, 177–178
  - pulmonary, 175–177
  - surgical resection of, 175–182
- Microinvasive breast cancer, 84–85
- N**
- Neoadjuvant chemotherapy (*see* Primary chemotherapy)

- Nipple discharge, 79, 255–262  
 classifications of, 255–256  
 endocrine-mediated, 256–257  
 evaluation, 259–260  
 future directions, 260–261  
 intrinsic etiologies, 257–259  
 physiology, 256
- O**
- Oncogene, 193–209  
*bcl-2*, 195–198, 205  
*BRCA1* and *BRCA2*, 198–205  
*HER-2/neu*, 193–195, 205, 325–326, 328  
 p53, 198, 203–206, 328–329
- P**
- Paget's disease, 85, 96
- Percutaneous biopsy, 72–76, 90–91  
 advanced breast biopsy instrumentation (ABBI), 75–76  
 core needle biopsy, 72–75  
 fine needle aspiration, 72–75, 90–91, 236  
 nonpalpable lesions, 73–75, 91  
 palpable masses, 72–73  
 stereotactic biopsy, 73–75, 91
- Pregnancy and breast cancer, 235–243  
 biopsy, 236  
 chemotherapy, 238–239  
 diagnosis, 235–236  
 incidence, 235  
 prognosis, 239–240  
 radiation therapy, 237–238  
 therapeutic abortion, 240
- Primary chemotherapy, 95, 213–226  
 chemosensitivity and, 214–215  
 downstaging of primary tumor, 214  
 future directions, 223–224  
 Goldie-Coldman hypothesis, 215  
 nonrandomized trials, 221–223  
 operable breast cancer and, 218–221  
 prognostic information and, 216–218
- R**
- Radiation therapy, 129–143  
 adjuvant systemic therapy and, 137–139  
 complications, 139–140  
 ductal carcinoma *in situ* (DCIS), 129–133  
 breast conserving therapy and, 95, 133–136  
 internal mammary lymph nodes, 305–307  
 local recurrence after, 140–141  
 locally advanced disease, 137–139  
 male breast cancer, 187–188  
 mastectomy and, 136–137  
 palliation of metastatic disease, 141–142  
 pregnancy and, 237–238
- Reconstruction of the breast, 111–128  
 alternative choices, 125  
 consultation, 111–114  
 controversies, 125–127  
 latissimus dorsi flap, 116–119  
 skin-sparing mastectomy, 107–108  
 tissue expander and implant, 114–116  
 transverse rectus abdominis myocutaneous flap, 119–125
- S**
- Sarcomas of breast, 263–266  
 angiosarcomas, 266  
 cystosarcoma phylloides, 264–265  
 etiology, 263  
 incidence, 263  
 lymphangiosarcoma (Stewart-Treves syndrome), 265–266  
 radiation-induced, 265–266
- Sentinel lymph node biopsy, 85, 94, 289
- Sestamibi scan, 61–62
- Stereotactic biopsy, 73–75, 91
- Stewart-Treves syndrome, 265–266
- Surgical biopsy, 76–79, 91  
 excisional, 76–79  
 incisional, 76  
 nipple discharge, 79  
 nonpalpable lesions, 76–78, 91  
 palpable masses, 76–78
- U**
- Ultrasound, 50–59  
 analysis, 55–59  
 equipment, 52  
 indications, 52  
 lesions, 55–59  
 normal anatomy, 53–55  
 technique, 52  
 vascular imaging, 59