

INDEX

Page numbers followed by “t” indicate tables.

abarelix, 36  
abiraterone acetate, 36  
accelerated partial breast irradiation (APBI), 200  
acquired immune deficiency syndrome (AIDS), and cerebral lymphoma, 370  
acral lentiginous melanoma (ALM), 396  
actinic keratosis, 384  
actinomycin-D, for gestational trophoblast tumours (GTT), 310  
activating functions  
    on oestrogen receptor, 25  
activator protein-1 (AP-1), 30  
active surveillance, for prostate cancer, 234  
acute lymphoblastic lymphoma (ALL), in children, 431  
acute myeloid leukaemia  
acute nausea and vomiting  
    after chemotherapy, 7  
adenocarcinoma, 180  
    in bladder, 223  
    of lung, 315  
adenoma-carcinoma sequence, 161  
*adenomatous polyposis coli* (APC), 161  
adipose tissue  
    oestrogen synthesis, 23  
adolescents. *See also* childhood cancer  
    cancer management, 428  
    cancers typically occurring, 427  
adult granulosa cell tumour, of the ovary, 264  
adverse events  
    report standardisation, 64  
 $\alpha$ FP (alpha feto-protein)  
    as marker for testicular cancer, 242  
    as potential vaccine target, 21  
age, and breast cancer incidence, 190  
aggressive fibromatosis, radiotherapy for, 450  
airway  
    acute obstruction, 74  
alcohol, and liver cancer, 142

alkaline phosphatase  
    evaluating before chemotherapy, 5  
alkylating agents, 2  
    for breast cancer, during pregnancy, 208  
    phlebitis from, 8  
allocation concealment, 58  
allopurinol, for lymphomas, 350  
alopecia  
    from chemotherapy, 8  
    from non-steroidal antiandrogens, 34  
alpha feto-protein ( $\alpha$ FP)  
    as marker for testicular cancer, 242  
alveolus, lower  
    cancer of  
        radical radiotherapy for, 105  
American Joint Committee on Cancer, 195  
    Cancer Staging Manual  
        for carcinoma of stomach, 135t  
American Society of Clinical Oncology (ASCO)  
aminoglutethimide, 27, 28  
aminoglycoside  
    for neutropenia, 6  
AML14 trial, 63  
amoxicillin, for *H.pylori* infection  
    eradication, 357  
amputation, for soft tissue sarcoma, 338  
anaemia  
    chemotherapy and, 5, 7  
    erythropoietin for, 20  
    and hypoxia, 287  
anal canal, anatomy, 174  
anal cancer, 174  
    anal intra-epithelial neoplasia (AIN), 175  
    areas of current interest, 181  
    clinical presentation, 176  
    current clinical trials, 181  
    human papilloma virus (HPV) and, 174  
    incidence and epidemiology, 174  
    investigation and staging, 176  
    palliative care, 180  
    pathology, 175  
    patients with HIV/AIDS, 180

prognosis, 180  
risk factors and aetiology, 174  
spread, 175  
as squamous carcinoma, 175  
    pathological features, 175t  
TNM classification and stage grouping, 176t  
treatment  
    follow up after radical therapy, 180  
    for locally-recurrent, 179  
    overview, 176  
    radical radiotherapy and  
        chemoradiotherapy, 177  
    radical surgery, 177  
    radiotherapy dose, fractionation and energy, 178  
    radiotherapy side effects, 178, 179  
    radiotherapy technique, 177  
    tumour types, 174  
analgesics  
    adjuvant, 84t  
anaphylaxis  
    chemotherapy and, 9  
    related to anticancer drugs, 79  
anaplastic large cell lymphoma, in children, 432  
anaplastic thyroid cancer  
    external beam radiotherapy (EBRT), 415  
    incidence and epidemiology, 415  
    prognosis, 415  
    spread, 415  
    treatment, 415  
anastrozole, 28, 34, 203  
    for breast cancer treatment, 27  
    vs. tamoxifen, 29  
androgen deprivation therapy (ADT), 31–34  
    adverse effects, 34  
androgen receptor (AR), 25  
androgens  
    effects, 26  
    synthesis, 24  
androstenedione, 24

## Index

- angiography, for neuroendocrine tumours (NETs), 421  
 angiosarcoma, 393  
 ankylosing spondylitis, radiotherapy for, 449  
 anorexia, 87  
 anthracyclines,  
   antidotes for extravasation, 81t  
   for breast cancer, 202  
   metastatic disease, 206  
   during pregnancy, 208  
 cardiotoxicity, 4, 7  
 for mantle cell lymphoma, 357  
 reaction from, 81t  
 antiandrogens  
   for prostate cancer treatment, 237  
   steroidal, 35  
   withdrawing therapy, 34  
 antibiotics  
   for febrile neutropenia, 78  
   prophylactic, 79  
 anticipatory nausea and vomiting, 7  
 antidiuretic hormone (ADH)  
   excess levels, 71  
 antidotes  
   for extravasation, 81t  
 anti-EGFR agents  
   skin rash with, 17  
 anti-emetics, 86t  
   prescribing, 84  
 antigen vaccines, 20  
 antimetabolites, 2  
 antitumour antibiotics, 2  
 anxiety, 88  
 aprepitant  
   for treating nausea from chemotherapy, 7  
 area under the curve (AUC) dosage, 4  
 aromatase inhibitors (AIs), 25, 203  
   for breast cancer treatment, 28, 30  
   vs. tamoxifen, 29  
 arterial restenosis, radiotherapy for, 449  
 arteriovenous malformation (AVM),  
   cerebral, radiotherapy for, 449  
 artificial hips  
   and radiotherapy planning, 45  
 asbestos, 329  
   clinical effects, 329  
   and mesothelioma, 328  
   types, 328  
 ascites, 88  
   in ovarian cancer, palliative care for, 263  
 ASCO, 19, 155  
 Askin's tumour of the rib, 438  
 asthenia  
   from non-steroidal antiandrogens, 34  
 L-asparaginase  
   anaphylaxis from, 79  
 ASTRO consensus definition, 237  
 ataxia-telangiectasia (A-T), and breast cancer, 192  
 attendance allowance, 91  
 attenuated FAP, 160  
 attrition bias, 61  
 atypical carcinoid, 325  
 autonomy of patient  
   decision making and, 91  
 Avastin®. *See* bevacizumab (Avastin®)  
 axilla, radiotherapy for lymphoma, 361  
 axillary node clearance, 198  
  
 $\beta$ hCG (beta human chorionic gonadotrophin), as marker for testicular cancer, 241  
 B catenin  
   as potential vaccine target, 21  
 B-cell lymphoma  
   in children, 432  
   diffuse large  
     clinical presentation, 351  
     prognosis, 353  
     risk of relapse, 350  
     treatment flow chart, 351  
     treatment for advanced stage, 352  
     treatment for early stage, 351  
     treatment for relapsed/refractory disease, 352  
     treatment overview, 351  
 back, pain from lung cancer, 316  
*balanitis xerotica obliterans*, 252  
 Barrett's oesophagitis, 122  
   and gastric cancer, 133  
 basal cell carcinoma, 382, 383  
   radiotherapy dose calculation, 391  
 Bazex's syndrome, 383  
 BC Cancer Agency, 1  
 BCG therapy, for bladder cancer treatment, 225  
 BCR-ABL fusion protein, 15  
 beam data  
   arrangements, 43  
   concepts of basic, 42  
   matching adjacent in complex treatment, 45  
 beam divergence, 42  
 beam penumbra, 42  
 Beatson, G.T., 23  
 benign conditions, radiotherapy for, 449–452  
 benign proliferative breast disease, and breast cancer incidence, 190  
 benzodiazepines  
   for anticipatory nausea, 7  
   for anxiety, 88  
 BEP regimen  
   for testicular cancer, 2  
   practical management, 247  
   versions  
  
 bevacizumab (Avastin®), 19  
   for liver cancer treatment, 145  
   for metastatic breast cancer, 206  
   for metastatic colorectal cancer, 169  
   for pancreatic cancer treatment, 157  
 bicalutamide, 31, 32, 34  
   for prostate cancer, 31, 237  
 bile ducts  
   anatomy, 146  
   carcinoma of, 141  
     blood tests, 147  
     chemotherapy, 148  
     clinical presentation, 146  
     clinical trials, 149  
     imaging, 147  
     incidence and epidemiology, 145  
     palliative care, 148  
     photodynamic therapy (PDT), 148  
     prognosis, 149  
     radical surgery for, 148  
     stents, 148  
     treatment overview, 147  
     tumour types, 146t, 188t  
 bilirubin  
   evaluating before chemotherapy, 5  
 Billroth II partial gastrectomy  
   surgical scheme, 136  
 biochemical renal, liver, and bone profile  
   before chemotherapy, 5  
 biological agents, 13  
   cytokines, 13–15  
 biopsy  
   for breast cancer assessment, 194  
   for cancer of unknown primary, 443  
   for mesothelioma, seeding risk from, 332  
 bisacodyl  
   for constipation, 85  
 Bismuth classification, for perihilar tumours, 146t  
 bisphosphonates, 34  
   for metastatic breast cancer, 207  
   for myeloma, 365  
   for prostate cancer, 238  
   side effects, 71  
 bladder  
   anatomy, 222  
   tumour types, 222  
 bladder cancer, 222  
   areas of current interest, 229  
   chemoradiotherapy for, 227  
   chemotherapy for, 228  
   clinical presentation, 223  
   current trials, 229  
   incidence and epidemiology, 222  
   invasive, managing nodes, 227  
   investigation, 223  
   pathology, 223

- radical radiotherapy for, 226  
 applications, 226  
 beams, 227  
 doses, 227  
 setup, 226  
 target volume, 226  
 use of CRT/IMRT, 227  
 radiotherapy plan, 227  
 risk factors and aetiology, 222  
 screening, 222  
 staging, 224  
 TNM classification, 224t  
 treatment  
   of invasive, 225–227  
   overview, 224  
   patient fitness and attitude, 226  
 bleeding, 75  
 post menopausal, and endometrial carcinoma, 269  
 bleomycin, 12  
   in BEP regimen for testicular cancer, 2  
   for diffuse large B-cell lymphoma, 352  
   flat dosing of, 4  
   for Hodgkin lymphoma, 359  
     in children, 432  
   reaction from, 81t  
   for testicular cancer, metastatic disease, 247  
   for vulval cancer, 300  
 bleomycin lung, 247  
 blood count  
   before chemotherapy, 5  
 blood tests, for pancreatic cancer  
   investigation, 153  
 body surface area (BSA)  
   for chemotherapy dose calculation, 3  
 body weight dosing, 4  
 bone  
   breast cancer spread to, 207  
   heterotropic formation, radiotherapy for, 450  
   radiotherapy impact on growth in child, 429  
   and radiotherapy planning, 45  
   solitary plasmacytoma, 366  
 bone marrow transplantation (BMT), 366  
   for childhood leukaemia, 431  
 bone mineral density (BMD), 28  
   bicalutamide impact, 34  
   prostate cancer impact, 34  
 bone scans, for prostate cancer, 233  
 bone tumours, 335, 341–345  
   anatomy and pathology, 341  
   areas of current interest, 344  
   chemotherapy, 343  
   in children  
     Ewing's sarcoma/peripheral PNETs, 438  
     osteosarcomas, 438  
   clinical presentation, 342  
   clinical trials, 345  
   incidence and epidemiology, 341  
   investigation and staging, 342  
   metastatic disease, treatment, 447  
   palliative care, 344  
   prognosis, 344  
   recurrent disease, 344  
   risk factors and aetiology, 341  
   spread, 341  
   staging classification, 342  
   surgery, 343  
   treatment overview, 343  
   tumour types, 341, 342  
 bortezomib  
   for mantle cell lymphoma, 357  
   for myeloma, 365  
 bowel obstruction, in ovarian cancer,  
   palliative care for, 263  
 Bowen's disease, 252  
 brachytherapy, 51–53  
   for anal cancer, 178  
   areas of current interest, 53  
   for cervical cancer treatment, 282, 284, 287  
   post operative, 286  
 dosimetry, 51  
   for endometrial carcinoma, 271, 273  
   gynaecological, Manchester system for, 52  
   for head and neck tumours, 98  
   for lung cancer, 323  
   for oral cavity tumours, 104  
   for penile cancer, 254  
   for prostate cancer, 235  
     high dose rate afterloading, 235  
     morbidity from, 235  
   quality assurance, 53  
   radiographs from intracavitary  
     treatment of cervical carcinoma, 285  
   radionuclide properties, 51  
   reference point for bladder and rectum  
     during gynaecological, 284  
   treatment, 52  
 brain  
   metastatic disease, treatment, 447  
   radiotherapy, 376  
   toxicity, 378  
   tumour treatment, 373–376  
     of ependymoma, 374  
     of high grade glioma, 374  
     of low grade glioma, 373  
     of medulloblastoma, 374  
     of meningioma, 374  
     of metastases, 375  
     of pineal tumours, 375  
     of pituitary, 375  
 brain stem  
   shielding in radiotherapy, 113  
 breast  
   female anatomy, 190  
   radiotherapy impact in children, 430  
   tumours affecting, 191t  
 breast cancer  
   adjuvant treatment  
     chemotherapy, 201  
     dose-dense chemotherapy regimens, 203  
     endocrine treatment, 203  
     guidelines, 201  
     radiotherapy, 199  
     risk categories, 201  
     trastuzumab (Herceptin®), 204  
   antioestrogens for, 26  
   areas of current interest, 30  
   bilateral, 208  
   clinical presentation, 194  
   clinical trials, 210  
   endocrine responsive, 201  
   hormonal therapies, 25, 27  
   incidence and epidemiology, 190  
   inflammatory, 208  
   lapatinib against, 17  
   lifetime risk, 190  
   locally-advanced  
     chemotherapy, 205  
     management, 204  
   male, 208  
   mechanisms of resistance, 29  
   metastatic disease, 205–207  
     bisphosphonates, 207  
     chemotherapy, 206  
     hormone therapy, 205  
     targeted therapy, 206  
   N and M staging, 196  
   ovarian function suppression, 26  
   Paget's disease, 208  
   pathology, 192  
   and pregnancy, 207  
   prognosis  
     five-year survival rate, 209, 210t  
     histological type, 209  
     hormone receptor status, 209  
     lymphatic or vascular invasion, 209  
     regional lymph node status, 209  
     ten-year survival, 210t  
   recurrent disease, 207  
   risk factors and aetiology, 190  
   screening and prevention, 193  
   spread, 193  
   stage groupings, 196t  
   staging, 195  
   studies in early, 29  
   surgery  
     axillary surgery, 198  
     breast conserving surgery, 197

## Index

- breast cancer (*cont.*)  
     breast reconstruction, 198  
     modified radical mastectomy, 197  
     TNM classification, 195t  
     trastuzumab for, 3, 18, 204  
     treatment  
         adjuvant choices, 201  
         ductal carcinoma *in situ* (DCIS), 195  
         lobular carcinoma *in situ* (LCIS), 196  
         radiotherapy to regional lymphatics, 200  
         role of radiation boost, 200  
         treatment protocol importance, 1  
         triple assessment, 194  
 breast conserving surgery, vs. mastectomy, 204  
 bronchial carcinoid, 325  
 bronchoscopy  
     interventional, 75  
 bronchus  
     anatomy, 314  
     blockage of, 74  
     radical radiotherapy plan for, 49  
 BSA. *See* body surface area (BSA)  
 buccal mucosa  
     cancer of  
         radical radiotherapy for, 105  
 Burkitt lymphoma  
     in children, 432  
     risk of relapse, 350  
     and tumour lysis syndrome (TLS), 80  
 caesium-137  
     properties, 51  
 calcitonin, 71  
     and recurrent thyroid cancer  
         recurrence, 415  
 Calvert equation, 4  
 cancer antigen (CA) 19-1 tumour marker, 153  
 cancer of unknown primary (CUP)  
     basics, 442  
     clinical presentation, 443  
     diagnostic and treatment algorithm, 445  
     histological subtypes, 443t  
     immunohistochemical stains for  
         diagnosis, 444t  
     incidence and epidemiology, 442  
     investigation, 443  
     palliative care, 447  
     prognosis, 447  
     unfavourable subsets, 446t  
     risk factors and aetiology, 442  
     staging classification, 444  
     treatment, 446  
         chemotherapy, 447  
         radiotherapy, 446  
         surgery, 446  
 canertinib, 16  
 capecitabine (Xeloda®), 2, 11  
     capecitabine palmar–plantar  
         erythrodysesthesia (PPE) from, 8  
     in chemotherapy for colorectal cancer, 164, 169  
     for colorectal cancer (CRC), 173t  
     diarrhoea from, 8  
     for liver cancer treatment, 145  
     for pancreatic cancer treatment, 156  
 carboplatin, 12  
     anaphylaxis from, 79  
     for cervical cancer treatment, palliative  
         care, 286  
     dose calculation based on renal  
         function, 4  
     for endometrial carcinoma, 273  
     for ovarian cancer treatment, 3, 261  
     for small cell lung cancer, 321  
     for testicular cancer treatment, 244  
     renal function measurement when  
         using, 4  
 carcino-embryonic antigen (CEA)  
     as potential vaccine target, 21  
 carcinoid syndrome, 325  
     and neuroendocrine tumours, 419  
 carcinoid, bronchial, 325  
 ‘carcinoma *in situ*’, 223  
 carcinosarcoma, 275  
 cardiac failure  
     congestive, 35  
 cardiac function  
     assessment before chemotherapy, 4  
 cardiac tamponade, 77  
 cardiotoxicity  
     from chemotherapy, 7  
 carer’s allowance, 91  
 carina  
     blockage of, 74  
 case studies  
     in research, 56  
 caspase 8  
     as potential vaccine target, 21  
 castration, 31  
 cauda equina compression  
     and malignant spinal cord, 72–73  
 celecoxib, 31  
 cells  
     interferon alpha (IFNα) production by, 14  
 cellular vaccines, 20  
 central carcinoid, 325  
 central lines  
     before chemotherapy, 5  
 central nervous system. *See also* brain  
     anatomy, 370  
     primary lymphoma (PCNSL)  
         clinical presentation, 353  
         investigation, 353  
     management, 353  
 central nervous system tumours  
     areas of current interest, 379  
     characteristics, 370  
     in children, 432  
         brain stem glioma, 434  
         craniopharyngioma, 436  
         ependymoma, 434  
         high grade glioma, 434  
         low grade glioma, 433  
         medulloblastoma, 435  
     primitive neuroectodermal tumours, 435  
     site/incidence, 433  
     staging, 433  
     clinical presentation, 371  
     clinical trials, 380  
     incidence and epidemiology, 370  
     inherited syndromes and, 371  
     investigation and staging, 372  
     pathology, 371  
     prognosis, 379t  
     recurrent disease,  
     risk factors and aetiology, 370  
     spread, 371, 372t  
     treatment, 373–377  
     WHO classification, 372t  
 cephalosporin  
     for neutropenia, 6  
 cerebral arteriovenous malformation  
     (AVM), radiotherapy for, 449  
 cerebrospinal fluid  
     flow obstruction, 74  
 Cervarix®, 20  
 cervical cancer  
     areas of current interest, 287  
     as cause of death, 278  
     clinical presentation, 280  
     clinical trials, 288  
     HPV and, 20  
     incidence and epidemiology, 278  
     investigation and staging, 280  
     pathology, 280t  
     in pregnancy, 286  
     prognosis, 287  
     radiographs from intracavitary  
         brachytherapy treatment, 285  
     risk factors and aetiology, 278  
     screening for, 279  
     small cell carcinoma, 287  
     spread, 280  
     staging classification, 280, 281t  
     survival, 287t  
     treatment  
         chemotherapy toxicities, 286  
         overview, 280  
         radiotherapy, 282–286  
         surgery, 282  
     tumour types, 278, 279t

## Index

- cervical intraepithelial neoplasia (CIN),  
   grading, 280
- cervical lymphadenopathy, 119–120  
   clinical presentation of, 119  
   investigation and staging, 119  
   staging classification, 119  
   treatment overview, 119
- cervix, anatomy, 278
- cetorelix, 36
- cetuximab (Erbix<sup>®</sup>), 18, 100  
   for metastatic colorectal cancer, 169  
   for pancreatic cancer treatment, 157  
   skin rash from, 17
- charged particle therapy, for ocular  
   melanoma, 404
- CHART (Continuous Hyperfractionated  
   Accelerated RT), 318
- chemical agent exposure, and liver cancer,  
   142
- chemoradiotherapy  
   for cervical cancer treatment, 283  
   toxicity, 285  
   for non-small cell lung cancer stage III,  
     319  
   for vaginal carcinoma, 294  
   for vulval cancer, 300
- chemotherapy  
   adjuvant  
     for breast cancer, 201  
     for rectal carcinoma, 165  
   administration, 8, 9  
   for advanced cutaneous melanoma, 400  
   palliative care, 401  
   aims of, 1  
   for anal cancer  
     combined with radiotherapy, 178  
     palliative care, 180  
   anaphylaxis related to, 79  
   for bile tract cancer, 148  
   for bladder cancer, 228  
   for breast cancer, during pregnancy, 207  
   for cancer of unknown primary (CUP),  
     447  
   cell-cycle specificity of drugs, 2  
   for cervical cancer treatment, toxicity,  
     286  
   for childhood cancer, leukaemia, 431  
   for CNS tumours, 380  
     recurrence, 379  
   for colorectal cancer (CRC), 173t  
   dose calculation, 3, 4  
   for endometrial carcinoma, 273  
     high risk, 274  
   for epithelial-stromal ovarian cancers,  
     261–262  
   extravasation of, 80  
   for gastric cancer  
     adjuvant treatment, 137  
     palliative care, 137  
   perioperative, 137  
     with radiotherapy, 138–139  
   for gastrointestinal stromal tumours  
     (GIST), 186  
   for gestational trophoblast tumours  
     (GTT), 307–309  
     risk of secondary malignancy, 310  
   for head and neck tumours, 98  
     concurrent with radiotherapy, 98  
     of nasopharynx, 112  
     palliative care, 99  
     postoperative concurrent with  
       radiotherapy, 98  
   for Hodgkin lymphoma, in children,  
     432  
   indications for, 1  
   for liver metastases from colorectal  
     cancer, 168  
   for mesothelioma, 332  
   for myeloma, 365  
   for neuroendocrine tumours (NETs),  
     423  
   for non-small cell lung cancer, 320  
     with radiotherapy for stages III, 319  
     after surgery for stages I and II, 318  
     for stage III, 318  
     for stage IV, 320  
   for oesophageal cancer  
     palliative care, 129  
   for oesophageal cancer  
     preoperative, 125  
   for penile cancer, 256  
   pretreatment investigations and checks,  
     4, 5  
   protocols and guidelines, 3  
   for prostate cancer, palliative care, 238  
   scheduling and administration, 2, 3  
   for seminoma, 244  
   for small cell lung cancer, 321  
   for soft tissue sarcomas, 339  
   for testicular cancer relapse, 246  
   for thyroid cancer, 412, 416  
   for trophoblast disease, 309t  
   for vulval cancer, 300
- chemotherapy toxicities  
   alopecia, 8  
   anaemia, 7  
   cardiotoxicity, 7  
   diarrhoea, 8  
   fertility and foetal abnormalities, 8  
   nausea and vomiting, 7  
   neutropenic fever and sepsis, 6  
   palmar-plantar erythrodysesthesia  
     (PPE), 8  
   phlebitis, 8  
   renal toxicity, 7
- chest wall, pain from lung cancer, 316
- childhood cancer  
   basics, 426  
   bone tumours  
     Ewing's sarcoma/peripheral PNETs,  
       438  
     osteosarcomas, 438  
   central nervous system tumours, 432  
     brain stem glioma, 434  
     craniopharyngioma, 436  
     ependymoma, 434  
     high grade glioma, 434  
     low grade glioma, 433  
     medulloblastoma, 435  
   primitive neuroectodermal tumours,  
     435  
     site/incidence, 433  
     staging, 433  
   germ cell tumours, 440  
   hepatoblastoma, 440  
   hepatocellular carcinoma, 440  
   international co-operative groups, 426  
   leukaemias, 431  
     treatment, 431  
   lymphomas, 347, 431  
     Hodgkin lymphoma (HL), 431  
     non-Hodgkin lymphoma (NHL), 432  
   management basics, 427  
   neuroblastoma, 436  
   NICE guidelines, 440  
   possible causes, 427  
   radiotherapy, 428  
     effect on eyes/ears/teeth, 430  
     effect on growth, 429  
     effect on organ development, 430  
     late consequences, 428  
     neuropsychological/cerebral effects,  
       429  
     risk of second malignancies, 431  
     sexual development/fertility, 430  
     side effects, 428  
   retinoblastoma, 438  
   soft tissue sarcomas  
     non-rhabdomyosarcomas, 440  
     rhabdomyosarcoma, 439  
   thyroid cancer, 412  
   types, 426  
     classification by age group, 426  
     Wilm's tumour, 437
- Child-Pugh grading system for cirrhosis,  
   145
- Children's Cancer and Leukaemia Group  
   (CCLG), treatment guidelines for  
     Hodgkin lymphoma, 360
- chlorambucil, for follicular lymphoma,  
   354
- cholangiocarcinoma, 146
- cholinergic syndrome, 9  
   diarrhoea as component, 8
- chondrosarcoma, managing, 343
- CHOP chemotherapy  
   for non-Hodgkin lymphoma, 2

## Index

- choriocarcinoma, 304, 306  
 chronic myelogenous leukaemia  
   IFNa for, 14  
 circumcision, and penile cancer, 252  
 cirrhosis, Child-Pugh grading system for, 145  
 cisplatin, 12  
   antidotes for extravasation, 81t  
   in BEP regimen for testicular cancer, 2  
   for bladder cancer treatment, 227  
   for cervical cancer, 281, 284  
     palliative care, 286  
   for cholangiocarcinoma palliative care, 148  
   for gestational trophoblast tumours (GTT), 309  
   for non-small cell lung cancer, 320  
   for oesophageal cancer, 127  
   for osteosarcoma, 343  
   renal function measurement when using, 4  
   renal toxicity, 7  
   for small cell lung cancer, 321  
   for testicular cancer  
     metastatic disease, 247  
     relapsed disease, 249  
   for vulval cancer, 300  
 classical seminoma, 240  
 clinical target volume (CTV), 41  
   growth from GTV to, 41  
 clinical trial authorisations (CTA), 64  
 clinical trials, 55–63  
   blinding, 58  
   choice of endpoints, 57  
   choice of subjects, and how many, 59  
   in context, 67  
   data analysis - intention-to-treat principle, 60  
   data collection, 60  
   factors in success, 55  
   with negative or inconclusive results, 66  
   randomised controlled trial (RCT), 56  
   size of, 62  
   subgroups in, 61  
 Clinical Trials Toolkit, 65  
 clodronate, for bone metastases, 207  
 clostridium difficile  
   and diarrhoea, 87  
 clubbing, finger and/or toe, 316  
 CMF (cyclophosphamide, methotrexate, 5-FU), for breast cancer treatment, 202  
 cobalt-60  
   properties, 51  
 Cockcroft Gault formula, 247  
 Cockcroft-Gault formula for calculating creatinine clearance, 4  
 co-codamol, 85t  
 co-danthramer  
   for constipation, 86  
 codeine  
   for diarrhoea, 87  
 colon, risk factors for malignant potential within polyps, 162t  
 colonoscopy, for colorectal cancer screening, 161  
 colorectal cancer (CRC), 159  
   adjuvant chemotherapy for, 164  
   areas of current interest, 170  
   bevacizumab for, 19  
   chemotherapy, 173t  
   clinical presentation  
     criteria for referral to specialist, 162  
     symptoms and signs from primary tumour, 162  
   current clinical trials, 170  
   Dukes', TNM and AJCC staging classifications, 163  
   follow up after radical therapy, 170  
   incidence and epidemiology, 159  
   investigation, 163  
   irinotecan-refractory, 18  
   locoregional recurrence, 168  
   morphology, 161  
   pathological staging, 163  
   pathology, 161, 162t  
   range of tumours, 160t  
   risk factors and aetiology  
     associated conditions, 160  
     environmental factors, 160  
     family history, 159  
   screening and prevention, 159, 160  
   spread, 161  
   TNM classification, 164t  
   treatment for advanced/inoperable, 167  
   treatment for metastatic disease, isolated liver metastases, 168  
   treatment for non-metastatic disease, 163  
   types, 159  
 common bile duct, 151  
 communication issues, 89–91  
   speed of information sharing, 90  
 compensation, for mesothelioma patients, 332  
 confidence intervals, 59  
 confusion and delirium, 88  
 congestive cardiac failure  
   from DES, 35  
 CONSORT guidance, 67  
   constant region  
     of antibodies, 18  
 constipation, 85  
 continent urinary diversion, as cystectomy option, 226  
 cost effectiveness  
   research evidence of, 65  
 Cowden's syndrome (PTEN), and breast cancer, 192  
 craniopharyngioma, in children, 436  
 craniospinal axis, radiotherapy of, 377, 378  
   toxicity, 378t  
 creatinine clearance  
   Cockcroft-Gault formula for calculating, 4  
 Crohn's colitis, and colorectal cancer, 160  
 crying by patient, 90  
 cryosurgery, for skin cancer treatment, 385  
 cryptorchidism, and testicular cancer risk, 240  
 CT scan  
   for neuroendocrine tumours (NETs), 421  
   for pancreatic cancer, 153  
   for prostate cancer, 233  
 CT simulation  
   in radiotherapy planning, 40  
 curettage, for skin cancer treatment, 385  
 cutaneous B-cell lymphoma, 393  
 cutaneous melanoma  
   areas of current interest, 402  
   Clark's classification, 397t  
   clinical features suggestive of, 398t  
   clinical presentation, 397  
   clinical trials, 403  
   depth of invasion, 397  
   differential diagnosis, 398  
   incidence and epidemiology, 395  
   investigation and staging, 398  
   pathology, 396  
   prognosis, 401  
     five-year survival rate, 401t  
   risk factors and aetiology, 395, 396t  
   screening and prevention, 396  
   spread, 397  
   stage groupings, 399t  
   TNM classification, 399t  
   treatment  
     adjuvant therapy, 400  
     for advanced disease, 400  
     endocrine treatment, 401  
     overview, 398  
     palliative care, 401  
     surgery, 399  
     surgery excision margins, 399t  
   types, 395  
 cycizine, 86t  
   for treating nausea from chemotherapy, 7  
 cyclophosphamide, 11  
   for breast cancer, 202  
   for diffuse large B-cell lymphoma, 351, 352  
   for Ewing's sarcoma, 343  
   for gestational trophoblast tumours (GTT), 310



Index

- for Hodgkin lymphoma, in children, 432
  - for mantle cell lymphoma, 357
  - for metastatic soft tissue sarcoma, 340
  - for myeloma, 365
  - for non-Hodgkin lymphoma treatment, 2
    - reaction from, 81t
    - renal toxicity, 8
  - CYP1B1 Inhibitors, 36
  - cyproterone acetate, 31
    - for prostate cancer, 31, 35
  - cystectomy, 225
    - patient fitness and attitude, 226
    - radical, 226
  - cytarabine, for diffuse large B-cell lymphoma, 352
  - cytogenetics, for renal cell tumour analysis, 215
  - cytokines, 13–15
    - combination regimens, 15
    - interferons, 14
    - interleukin-2 (IL-2), 13
      - for renal cell cancer, palliative care, 218
  - cytology, for breast cancer assessment, 194
  - cytosine arabinoside, for mantle cell lymphoma, 357
  - cytotoxic chemotherapy, 1
    - agents classified by reaction, 81t
    - for prostate cancer, palliative care, 238
  - dacarbazine, 11, 12
    - for advanced cutaneous melanoma, 400
    - for Hodgkin lymphoma, 359
      - in children, 432
    - for metastatic soft tissue sarcoma, 340
    - phlebitis from, 8
  - dactinomycin, for Ewing's sarcoma, 343
  - darbepoetin alpha, 20
  - dasatinib, for gastrointestinal stromal tumours (GIST), 188
  - data monitoring committees (DMC), 65
  - de novo* resistance
    - to endocrine therapy, 29
  - decision making
    - ethical, 91
  - degarelix, 36
  - deleted in colon cancer (DCC) tumour suppressor gene, 161
  - dendritic cell vaccines, 21
  - denial
    - as patient response, 89
  - density of organs
    - inhomogeneities in radiotherapy planning, 45
  - depression, 88
    - as ADT adverse effect, 34
  - dermatofibrosarcoma protuberans, 393
  - dermoid cysts, 265
  - desmoid tumours, radiotherapy for, 450
  - dexamethasone, 35
    - for mantle cell lymphoma, 357
    - for myeloma, 365
    - for prostate cancer, 31
    - for treating nausea from chemotherapy, 7
  - DHA sulphate, 24
  - diamorphine, 76
  - diaphysis of long bone, 341
  - diarrhoea, 87
    - from chemotherapy, 8
  - dietary factors, and breast cancer incidence, 191
  - diethylstilboestrol
    - for prostate cancer, 31
  - diethylstilboestrol (DES), 31, 35
    - and breast cancer incidence, 191
  - differentiated thyroid cancer
    - areas of current interest, 413
    - chemotherapy, 412
    - clinical presentation, 408
    - external beam radiotherapy (EBRT), 411
    - follow up, 413
    - incidence and epidemiology, 408
    - investigation and staging, 409
    - prognosis, 413
    - radioisotope therapy, 410
    - risk factors and aetiology, 408
    - serum thyroglobulin, 409
    - surgery, 409
    - thyroxine for treating, 410
    - treatment overview, 409
  - diffuse large B-cell lymphoma
    - clinical presentation, 351
    - prognosis, 353
    - risk of relapse, 350
    - treatment
      - for advanced stage, 352
      - for early stage, 351
      - flow chart, 351
      - overview, 351
      - for relapsed/refractory disease, 352
  - digital rectal examination (DRE), for rectal cancer staging, 163
  - dihydroxyandrostenedione (DHA), 24
  - disability living allowance, 91
  - DNA-based vaccines, 21
  - docetaxel, 12, 31
    - anaphylaxis from, 79
    - for breast cancer treatment, 202
    - neutropenia from, 6
    - for non-small cell lung cancer, 320
    - for pancreatic cancer treatment, 156
  - domperidone
    - for treating nausea from chemotherapy, 7
  - dose calculation for chemotherapy
    - area under the curve (AUC) dosage, 4
    - body surface area (BSA), 3
    - body weight dosing, 4
    - dose capping, 4
    - flat dosing, 4
  - dose calculation for radiotherapy
    - dose verification, 46
  - double-blind trials, 58
  - Down's syndrome, and testicular cancer risk, 240
  - doxorubicin, 2, 11
    - for breast cancer treatment, 202
  - cardiotoxicity, 4, 7
  - for metastatic soft tissue sarcoma, 340
  - for osteosarcoma, 343
  - for soft tissue sarcomas, 339
  - for thyroid cancer, 412
  - hepatic impairment and, 5
- drop-outs
  - from trial, 61
- ductal carcinoma *in situ* (DCIS), 195
  - managing, 197t
  - radiotherapy for, 195
  - role of axillary nodal surgery, 195
  - scoring index, 195, 197t
  - tamoxifen for, 196
- Dutch TME Trial, 166
- dysgerminoma, 265
- dysphagia, 87
  - grading system, 123
- ear. *See also* middle ear
  - anatomy, 118
- Early Breast Cancer Trialists' Collaborative Group (EBCTCG), 66
- Early Prostate Cancer Trials, 34
- ears, radiotherapy impact in children, 430
- eccrine carcinoma, 392
- effectiveness of treatment
  - research on, 55
- efficacy of treatment
  - research on, 55
- EGFR tyrosine kinase inhibitors, 16
- elective lymph node dissection (ELND), 399
- elective nodal treatment
  - for head and neck tumours, 96
- electrodesiccation, for skin cancer treatment, 385
- electron depth dose curves, 391
- electron depth dose table
  - for 95 cm source-surface distance, 389
  - for 100 cm source-surface distance, 390

## Index

- embolisation, for neuroendocrine tumours (NETs), 423
- emergencies in oncology, 70
  - metabolic, 70
  - obstruction from GIST, 186
  - structural/obstructive, 72–77
    - acute airway obstruction, 74
    - bleeding, 75
    - cardiac tamponade, 77
    - malignant spinal cord and cauda equina compression, 72–73
    - raised intracranial pressure, 74
    - superior vena caval obstruction (SVCO), 73–74
    - urinary obstruction, 76
  - treatment overview, 70
  - treatment-related
    - anaphylaxis related to anticancer drugs, 79
    - extravasation of chemotherapy, 80
    - neutropenic fever and sepsis, 77
    - tumour lysis syndrome (TLS), 79
- end of life
  - palliative care at, 89
- endocrine responsive breast cancer, 201
- endocrine treatment
  - for advanced cutaneous melanoma, 401
  - for breast cancer treatment, 203
- endodermal sinus tumour, 265
- endometrial carcinoma, 267
  - areas of current interest, 274
  - clinical presentation, 269
  - clinical trials, 275
  - investigation and staging, 269
  - pathology, 268t
  - prognosis, 274
  - recurrent and metastatic disease, 274
  - risk factors and aetiology, 267
  - screening, 269
  - spread, 269
  - staging classification, 270t
  - treatment
    - brachytherapy, 271, 273
    - chemotherapy, 273, 274
    - hormonal therapies, 273, 274
    - overview, 270
    - radiotherapy, 271–273
    - radiotherapy toxicity, 272
    - surgery, 270
- endometrial stromal sarcoma, 275
- endoscopic laser photo-coagulation
  - for gastric cancer palliative care, 139
- endoscopic retrograde
  - cholangiopancreatogram (ERCP), 153
- endoscopic therapy
  - for inoperable colorectal cancer, 168
  - for oesophageal cancer, 129
- endoscopic ultrasound (EUS), 153
  - for rectal cancer staging, 163
- endpoint in cancer, 57
- energy level reduction
  - as ADT adverse effect, 34
- environmental factors
  - in gastric cancer, 133
- ependymoma
  - in children, 434
  - treatment, 374
- EPIC (European Prospective Investigation into Cancer and Nutrition), 160
- epidermal growth factor receptor (EGFR), 15
  - signalling, 100
- epirubicin, 11
  - for soft tissue sarcomas, 340
- epithelial growth factor receptor (EGFR), inhibitors of, 159
- epithelial-stromal ovarian cancers, 257–264
  - areas of current interest, 263
  - chemotherapy, 261–262
  - classification, 257
  - clinical presentation, 259
  - clinical trials, 264
  - fertility sparing treatment, 260
  - hormone therapy, 263
  - investigation and staging, 259
  - palliative care, 263
  - pathology, 258
  - prognosis, 263
  - recurrent disease, 262
  - risk factors and aetiology, 257
  - screening and prevention, 259
  - spread, 258
  - surgery, 260
  - treatment overview, 259
- ERBB2 HER-2
  - as potential vaccine target, 21
- Erbix<sup>®</sup> (cetuximab). *See* cetuximab (Erbix<sup>®</sup>)
- erlotinib (Tarceva<sup>®</sup>), 16
  - for liver cancer, 145
  - for pancreatic cancer, 157
  - for recurrent disease, non-small cell lung cancer (NSCLC), 320
  - skin rash from, 17
- erythroplasia of Queyrat, 252, 383
- erythropoietin, 7, 20
- ethanol injection, for liver cancer
  - treatment, 144
- ethical decision making, 91
- ethical issues in research, 63
  - data monitoring committees (DMC), 65
  - good clinical practice and ethics committees, 64
  - informed consent, 64
  - study protocol, 63
- ethics application process, 64
- ethinyloestradiol, 35
- ethmoid sinus
  - carcinoma of
    - TNM classification, 116t
- etoposide, 12
  - in BEP regimen for testicular cancer, 2
  - for diffuse large B-cell lymphoma, 352
  - for Ewing's sarcoma, 343
  - for gestational trophoblast tumours (GTT), 310
  - for osteosarcoma, 343
  - reaction from, 81t
  - for testicular cancer, metastatic disease, 247
- European Prospective Investigation into Cancer and Nutrition (EPIC), 160
- European Union (EU) Directive 64
- Ewing's sarcoma, 335, 341
  - anatomy and pathology, 341
  - in children, 438
  - metastases, 341
  - radiotherapy, 344
  - risk factors and aetiology, 341
  - treatment, 343
- exemestane, 27, 28, 203
  - vs. tamoxifen, 29
- extensive intraduct component (EIC), 209
- external beam radiotherapy (EBRT)
  - for liver cancer treatment, 144
  - for medullary thyroid cancer, 414
  - for oesophageal cancer
    - palliative care, 129
  - for thyroid cancer, 411
  - for thyroid lymphoma, 416
- extranodal marginal zone B cell lymphoma, 357
  - managing, 357
  - prognosis, 358
- extravasation, 8
  - antidotes for, 81t
  - risk factors for, 81t
- eyes, radiotherapy
  - impact in children, 430
  - for macular degeneration, 451
  - shield for, 386
- face, pain from lung cancer, 316
- factorial design of clinical trials, 62t
- faecal occult blood (FOB), and colorectal cancer screening, 161
- familial adenomatous polyposis (FAP), 160
- familial retinoblastoma, and soft tissue sarcomas, 336
- family history. *See* heredity
- febrile neutropenia
  - treatment, 78
- Federation Internationale de Gynaecologie et d'Obstetrique (FIGO)



- cervical cancer staging, 281t  
 endometrial carcinoma staging, 270t  
 GTT prognostic scoring system, 308  
 GTT staging classification, 307t  
 ovarian cancer staging, 260  
 staging classification, 259  
 vaginal tumour classification, 290  
 vulval cancer stage groupings, 299t
- female. *See also* breast cancer; ovaries; uterus  
 age, and molar pregnancy risk, 305  
 bladder anatomy, 222  
 hypothalamic-pituitary-gonadal axis in, 24
- Ferguson-Smith disease, 383
- fertility  
 from chemotherapy, 8  
 after chemotherapy for GTT, 310  
 endometrial carcinoma treatment and, 274  
 mantle radiotherapy and, 363  
 ovarian cancer surgery and, 260  
 testicular cancer treatment and, 249
- fever  
 neutropenic, 6
- fibre in diet, and colorectal cancer, 160
- fibromatosis, aggressive, radiotherapy for, 450
- fibrosarcoma, 336
- fibrous histiocytoma, malignant, 393
- financial considerations  
 in palliative care, 91
- fingers, clubbing, 316
- flat dosing, 4
- fludarabine, 11  
 for mantle cell lymphoma, 357  
 reaction from, 81t  
 for relapsed follicular lymphoma, 356
- fluid retention  
 from steriodal antiandrogens, 35
- fluoropyrimidines  
 in chemotherapy for colorectal cancer, 164  
 diarrhoea from, 8  
 for liver metastases from colorectal cancer, 169
- fluoroquinolone, 79
- 5-fluorouracil 2, 11  
 for breast cancer treatment, 202  
 cardiotoxicity, 7  
 for cholangiocarcinoma, 148  
 for colorectal cancer (CRC), 173t  
 diarrhoea from, 8  
 for gastric cancer, 137  
 for oesophageal cancer, 127  
 reaction from, 81t  
 for skin cancer treatment, 385
- flutamide, 34  
 for prostate cancer, 31, 237
- foetal abnormalities  
 from chemotherapy, 8
- folinic acid, 63
- follicular cancers, of thyroid, 407
- follicular lymphoma, 354  
 clinical presentation, 354  
 clinical trials, 356  
 management, 354, 356  
 prognosis, 354  
 treatment  
 of advanced, 354  
 flow chart, 355  
 of localised, 354  
 of relapsed, 356
- forward planning in IMRT, 47
- 5-FU folinic acid based chemotherapy, 63
- Fuhrman nuclear grading system, for renal cell tumours, 215
- fulvestrant, 27, 30  
 for breast cancer treatment, 27
- furosemide, 71
- gall bladder  
 anatomy, 146  
 blood tests, 147  
 carcinoma  
 incidence and epidemiology, 145  
 photodynamic therapy (PDT), 148  
 risk factors and aetiology, 146  
 tumour types, 145  
 clinical presentation, 146  
 imaging, 147  
 treatment  
 overview, 147  
 surgery, 148
- tumours, 141  
 types, 146t
- gangliosides, 20  
 as potential vaccine target, 21
- Gardasil®, 20
- Gardner's syndrome, 160
- and soft tissue sarcomas, 336
- gastrectomy, 136  
 surgical scheme, 136  
 Billroth II partial, 136
- gastric cancer, 132  
 clinical presentation, 134  
 incidence and epidemiology, 132  
 investigation and staging, 134  
 pathological features of diffuse-type, 134t  
 pathological features of intestinal-type, 134t  
 pathology, 133  
 prognosis, 139  
 risk factors, 133  
 spread, 134  
 stage classification, 135  
 stage groupings, 135t
- treatment  
 chemoradiotherapy side effects, 139t  
 chemotherapy, 137–138  
 concurrent chemoradiotherapy, 139  
 overview, 135  
 palliative radiotherapy, 139  
 radiotherapy and chemoradiotherapy, 138–139  
 surgery, 135  
 surgery, patterns of failure after, 136t  
 tumour types, 132, 133t
- gastrografin, 166
- gastrointestinal autonomic tumour (GANT), 183
- gastrointestinal stromal tumours (GIST), 15, 183  
 clinical presentation, 185  
 clinical trials, 188  
 dasatinib, 188  
 sunitinib (Sutent®), 188  
 follow up after surgery, 187  
 histogenesis, 183  
 imatinib (Glivec®) for, 186–187  
 contrast enhanced CT for assessing response, 187  
 response rate, 188  
 toxicities, 187
- immunohistochemical features, 184t  
 incidence and epidemiology, 183  
 investigation and staging, 185  
 KIT-negative, 187  
 molecular classification, 184t  
 palliative care, 187  
 pathology, 184  
 prognosis, 188t  
 risk factors and aetiology, 183  
 special clinical situations, 187  
 spread, 184  
 sunitinib activity against, 17
- treatment  
 chemotherapy, 186  
 overview, 185  
 radiotherapy, 186  
 surgery, 185  
 tumour types, 183
- gastro-oesophageal reflux disease (GORD), 121
- gefitinib (Iressa®), 16  
 skin rash from, 17
- gemcitabine, 11  
 for bladder cancer treatment, 227  
 for cholangiocarcinoma palliative care, 148  
 for Hodgkin lymphoma, 359  
 for liver cancer treatment, 145  
 for metastatic or inoperable pancreatic tumour, 156  
 for non-small cell lung cancer, 320

## Index

- gemcitabine (*cont.*)  
 for pancreatic cancer treatment, 156  
 reaction from, 81t
- gene array technology, 66
- gene mutation  
 and breast cancer, 192  
 and gastric cancer, 133
- genetics, in renal cell carcinoma, 214
- geographic variation, in breast cancer  
 occurrence, 190
- germ cell tumours  
 in children, 440  
 in ovaries, 265  
 classification, 257  
 in testicular cancer  
 clinical presentation, 241  
 incidence and epidemiology, 240  
 investigation and staging, 241  
 pathology and classification, 240  
 risk factors and aetiology, 240  
 screening for, 240  
 spread, 241  
 testicular cancer types, 241t
- gestational trophoblast tumours (GTT),  
 304  
 chemotherapy, 307–309  
 investigation, 307  
 malignant forms, 306–307  
 choriocarcinoma, 306  
 invasive mole, 306  
 placental site trophoblast tumour  
 (PSTT), 307  
 risk of relapse and late treatment  
 complications, 309  
 serum hCG graphs during treatment,  
 310  
 staging classification and prognostic  
 classification, 307t  
 types, 304, 305t. *See also* molar  
 pregnancy  
 complete molar, 304  
 partial molar, 304  
 pre-malignant forms, 304
- Gleason system, 232t
- glioma  
 brain stem, in children, 434  
 high grade  
 in children, 434  
 treatment, 374, 377  
 low grade  
 in children, 433  
 treatment, 373, 377
- glomerular filtration rate (GFR), 4
- glottis  
 carcinoma of  
 radiotherapy for, 102  
 TNM stages, 101  
 treatment, 100
- glucocorticoids, 35
- glycolytic activity, identifying increased,  
 350
- gonadotropin releasing hormone  
 (GnRH/LHRH) agonists, 26
- good clinical practice (GCP)  
 aims of, 64  
 defining, 63  
 in randomisation, 58
- Gorlin's syndrome, 383  
 and soft tissue sarcomas, 336
- goserelin, 26, 31  
 for ovarian function suppression in  
 breast cancer treatment, 203  
 for prostate cancer, 31
- granisetron, 86t  
 for treating nausea from chemotherapy,  
 7
- granulocyte-colony stimulating factor  
 (G-CSF), 19  
 for febrile neutropenia, 78  
 prophylaxis, 6
- granulosa cell tumours, in ovaries, 264
- gross tumour volume (GTV), 41  
 delineating, 41  
 imaging to determine, 40
- growth hormone, deficit from  
 radiotherapy, 429
- gynaecological brachytherapy  
 Manchester system for, 52
- gynaecomastia  
 from DES, 35  
 from non-steroidal antiandrogens, 34
- H. pylori* infection  
 eradication therapy, 357  
 and MALT lymphoma, 357
- 5-HT3 (5-hydroxy-tryptamine 3)  
 antagonist  
 for treating nausea from chemotherapy,  
 7
- haematemesia  
 treatment, 75, 76
- haematogenous metastatic spread  
 of oesophageal tumour, 123
- haematological malignancies, 347.  
*See also* lymphomas
- IFNa for, 14
- paraproteinaemias/myeloma,  
 363–366  
 chemotherapy, 365  
 classification, 363  
 clinical presentation, 364  
 diagnosis and new definitions, 364  
 incidence and epidemiology, 364  
 investigation and staging, 364  
 pathology, 364  
 radiotherapy, 365  
 risk factors and aetiology, 364  
 treatment overview, 365
- haematuria, 75  
 and bladder cancer, 223  
 screening for, 222  
 treatment, 76
- haemopoietic colony stimulating factors,  
 19
- haemoptysis  
 treatment-related, 75
- hairy cell leukaemia  
 IFNa for, 14
- haloperidol, 86t
- head and neck tumours, 93. *See also*  
 larynx; maxillary antrum; middle  
 ear; nasal cavity; nasopharynx; oral  
 cavity; salivary gland
- anatomy, 93  
 areas of current interest, 99  
 chemotherapy for, 98  
 postoperative concurrent with  
 radiotherapy, 98  
 clinical presentation of, 94  
 clinical trials, 100  
 concurrent chemoradiotherapy for, 98  
 incidence and epidemiology, 93  
 investigation and staging, 95  
 pathology, 94  
 prognosis, 99  
 radiotherapy for, 96–98, 361  
 fractionation, 98  
 indications for postoperative, 97  
 management of acute reactions, 97  
 rehabilitation following radical  
 treatment, 99  
 risk factors and aetiology, 93  
 screening for, 94  
 solitary extramedullary plasmacytoma,  
 366  
 spread, 94  
 surgery for, 96  
 treatment overview, 95  
 elective nodal treatment, 96  
 types, 94t
- health economics  
 and research, 65
- heart. *See* cardiac . . .
- heat shock protein 90 (HSP-90)  
 and androgen receptor, 25
- hedgehog (HH) signalling pathway, 383
- height  
 before chemotherapy, 5
- Helicobacter pylori* infection  
 and gastric cancer, 133
- hemoptysis  
 treatment, 76
- hepatic arterial chemotherapy, for liver  
 cancer treatment, 144
- hepaticojejunostomy, 148
- hepatitis, and liver cancer, 142
- hepatoblastoma, in children, 440

- hepatocellular carcinoma. *See* liver cancer
- hepatotoxicity  
   DES and, 35  
   from steroidal antiandrogens, 35
- HER-2 oncogene, and breast cancer, 209
- Herceptin® (trastuzumab). *See* trastuzumab (Herceptin®)
- heredity  
   and breast cancer incidence, 192  
   and medullary thyroid cancer, 407  
   and neuroendocrine tumours, 418  
   and ovarian cancer risk, 258  
   and skin cancer risk, 383
- L'Hermite's sign, 363
- heterotropic bone formation (HBF),  
   radiotherapy for, 450
- Hickman line, for chemotherapy, 5
- high dose chemotherapy (HDCT), for  
   relapsed testicular cancer, 249
- histiocytoma, fibrous, 393
- histiosarcoma, malignant fibrous, 336
- HIV/AIDS patients, anal cancer risk, 180
- Hodgkin lymphoma (HL), 347, 358–361  
   in children, 431  
   managing advanced disease, 359  
   radiotherapy in, 360  
   managing early stage, 359  
   managing relapsed/refractory, 360  
   nodular lymphocyte predominant, 401t  
   treatment approach, 358  
   treatment flow chart, 359
- homogenous dose to the PTV  
   in critical analysis of treatment plans, 48
- hormonal therapies, 23  
   as adjunct to radical radiotherapy, 32  
   for breast cancer, 25, 27  
   for endometrial carcinoma, 273, 274  
   for epithelial-stromal ovarian cancers,  
   263  
   historical landmarks in anticancer, 23  
   for metastatic breast cancer, 205  
   for prostate cancer, 31  
   palliative care, 238  
   for renal cell cancer, 219
- hormone positive tumours  
   resistance to endocrine therapy, 29
- hormone receptor status, and breast  
   cancer prognosis, 209
- hormone replacement therapy (HRT), and  
   breast cancer incidence, 191
- hormones  
   classification, 23  
   receptors, 24  
   synthesis, 23
- human epidermal growth factor receptor 2  
   (HER-2) protein  
   as trastuzumab target, 18
- human papilloma virus (HPV)  
   and anal cancer, 174  
   and cervical cancer, 278  
   and Kaposi's sarcoma, 392  
   and penile cancer, 252  
   vaccine against, 20, 287  
   and vaginal cancer, 290
- Hürthle cell/oxyphil tumours, 407
- hydrocephalus  
   obstructive, 74
- hydronephrosis, 226
- 5-hydroxyindoleacetic acid (5-HIAA),  
   neuroendocrine tumours (NETs)  
   and, 420
- hypercalcaemia, 70  
   lung cancer and, 316
- hypernephroma, 214
- hypersensitivity  
   chemotherapy and, 9
- hypertrophic pulmonary  
   osteo-arthropathy (HPOA), 316
- hypocalcaemia, 71
- hypogammaglobulinaemia, thymomas  
   and, 325
- hypopharynx  
   anatomy, 108  
   carcinoma of, 108  
   clinical presentation of, 108  
   five-year survival rate, 110t  
   investigation and staging, 108  
   prognosis, 110  
   radical radiotherapy for, 110  
   surgery for, 110  
   TNM classification, 109t  
   treatment, 109
- hypothalamic-pituitary-gonadal axis  
   in female, 24  
   in male, 24
- hypothyroidism, from mantle  
   radiotherapy, 363
- hypoxia, cervical cancer and, 287
- hysterectomy, 270  
   for cervical cancer treatment, 282
- ibandronate, for bone metastases, 207
- idarubicin, 11  
   for myeloma, 365
- IFNAR, 14
- ifosfamide, 11  
   for diffuse large B-cell lymphoma, 352  
   for metastatic soft tissue sarcoma, 340  
   for osteosarcoma, 343  
   renal toxicity, 8  
   for small cell lung cancer, 321  
   for soft tissue sarcomas, 339  
   for testicular cancer, relapsed disease,  
   249
- ifosphamide  
   reaction from, 81t
- ileal conduit, as cystectomy option, 226
- imaging the patient  
   in radiotherapy planning, 40
- imatinib (Glivec®), 15, 16  
   acute gastrointestinal haemorrhage  
   from, 186  
   for gastrointestinal stromal tumours  
   (GIST), 186–187  
   contrast enhanced CT for assessing  
   response, 187  
   preoperative, 185  
   response rate, 188  
   toxicities, 187
- imiquimod 5%, for skin cancer treatment,  
   385
- immunotherapy  
   after radical nephrectomy, 218  
   for advanced cutaneous melanoma, 400  
   palliative care, 401
- implantable chemotherapy, for CNS  
   tumours, 380
- impotence  
   as ADT adverse effect, 34  
   from non-steroidal antiandrogens, 34
- incapacity benefit, 91
- income support, 91
- induction chemotherapy  
   for head and neck tumours, 98
- industrial exposure to chemicals, as  
   bladder cancer risk factor, 222
- infants, cancers typically occurring,  
   426
- infertility. *See* fertility
- inflammatory breast cancer, 208
- information  
   speed of sharing with patient, 90
- informed consent, 64  
   before chemotherapy, 4
- inguinal/pelvic fields, radiotherapy for  
   lymphoma, 362
- Inhibin, 23
- intensity-modulated radiation therapy  
   (IMRT), 47, 99  
   for bladder cancer treatment, 227  
   for breast cancer treatment, 200  
   for cervical cancer treatment, 287  
   forward planning, 47  
   inverse planning, 47  
   for liver cancer treatment, 144  
   for pancreatic cancer treatment, 157  
   for prostate cancer, 239
- intention-to-treat principle, 60, 61
- interferon alpha (IFN $\alpha$ ), 14
- interferon therapy  
   for cutaneous melanoma treatment, 402  
   for liver cancer treatment, 144  
   for neuroendocrine tumours (NETs),  
   423  
   for renal cell cancer  
   after radical nephrectomy, 218  
   palliative care, 218

## Index

- interferons, 14  
 interleukin-2 (IL-2), 13  
   after radical nephrectomy, 218  
   for renal cell cancer, palliative care, 219  
 internal margin (IM), 41  
 International Classification of Diseases, 335  
 International Commission on Radiation Units and Measurements (ICRU), 41, 51  
   reference point selection, 45  
 International Committee on  
   Harmonisation (ICH) guidelines, 64  
 International Federation. *See* Federation Internationale de Gynaecologie et d'Obstetrique (FIGO)  
 International Germ Cell Consensus Classification, 242  
 International Mesothelioma Interest Group (IMIG), staging system, 331  
 International Prognostic Factor Score (IPFS), for Hodgkin lymphoma, 359  
 International Prognostic Index (IPI), for non-Hodgkin lymphoma, 349  
 intracranial pressure  
   raised, 74  
 intraepithelial carcinoma, 252  
 intra-luminal brachytherapy (ILT)  
   for oesophageal cancer  
   palliative care, 129  
 intrathecal chemotherapy, 8  
 intratubular germ cell neoplasia (IGCN), 240  
   managing, 242  
 intravenous contrast  
   in CT scan, 40  
 invasive mole pregnancy, 306  
 inverse planning in IMRT, 47  
 investigational medicinal product (IMP), 64  
 involved field radiotherapy, for lymphomas, 361  
 iodine-125  
   properties, 51  
 Iressa® (gefitinib). *See* gefitinib (Iressa®)  
 iridium-192  
   properties, 51  
   wires, 51  
 irinotecan, 5, 12  
   cholinergic syndrome from, 9  
   for colorectal cancer (CRC), 164, 173t  
   for palliative care, 169  
   for liver cancer treatment, 145  
   for liver metastases, 169  
   for pancreatic cancer treatment, 156  
   reaction from, 81t  
 irinotecan-refractory colorectal cancer, 18  
 irradiated volume, 41  
 isodose plan - photons, 42  
   production, 44  
 Japanese Gastric Cancer Association nodal stations, 133  
 jargon  
   in patient communications, 90  
 jaundice, obstructive, investigation strategy for, 147  
 jugulo-digastric (JDG) node, 108  
 justice  
   decision making and, 91  
 juvenile granulosa cell tumour, of the ovary, 264  
 keloid, radiotherapy for, 451  
 keratoacanthoma, 384  
 ketoconazole, 31  
 kidney  
   anatomy, 214  
   cancer of. *See also* renal cell carcinoma  
     areas of current interest, 220  
     biological treatment, 218  
     chemotherapy, 219  
     clinical presentation, 215  
     clinical trials, 220  
     hormonal therapies, 219  
     incidence and epidemiology, 214  
     laparoscopic nephrectomy, 217  
     metastectomy, 217  
     occurrence, 214  
     palliative nephrectomy, 217  
     pathology, 215, 216  
     prognosis, 219t, 220  
     radical nephrectomy, 216  
     radiotherapy, 217  
     spread, 215  
     TNM stages, 217t  
     treatment overview, 216  
     tyrosine kinase inhibitors, 220  
   chemoradiotherapy tolerance dose for pancreatic tumour, 155  
   cisplatin impact on function, 247  
   function assessment before chemotherapy, 4  
   radiotherapy impact in children, 430  
   toxicity from chemotherapy, 7  
   tumour types, 214  
     differentiating benign from malignant, 216  
     Heidelberg classification, 215t  
     staging classification, 216  
 KIT tyrosine kinases  
   imatinib activity against, 15  
 KIT-negative GIST, 187  
 Klinefelter's syndrome, and testicular cancer risk, 240  
 knowledge  
   patient need for, 89–91  
 laboratory research, 66  
 lactulose  
   for constipation, 85  
 laparoscopic hysterectomy, 271  
 laparoscopic nephrectomy, 217  
 laparoscopy, for pancreatic cancer investigation, 153  
 lapatinib, 16, 17  
   skin rash from, 17  
 larynx  
   anatomy, 100  
   blockage of, 74  
   carcinoma of, 48, 100–103  
     clinical presentation of, 100  
     five-year survival rate, 103t  
     investigation and staging, 100  
     nodal and TNM stages, 101  
     radiotherapy dose, 103  
     radiotherapy for, 102  
     treatment, 100  
 laser therapy  
   for oesophageal cancer, 129  
 laxatives, 85  
 lead shields  
   for skin cancer treatment with radiotherapy, 386  
 leiomyosarcoma, 275, 336  
 lentigo maligna melanoma (LMM), 396  
 letrozole, 28, 203  
   for breast cancer treatment, 27  
   vs. tamoxifen, 29  
 leukaemia  
   and tumour lysis syndrome (TLS), 80  
   in children, 431  
   treatment, 431  
 leuprorelin, 31  
   for prostate cancer, 31  
 levamisole, 63  
 levofloxacin, 79  
 Leydig cells of the testis, 250  
   testosterone production, 24  
 Li Fraumeni syndrome, and soft tissue sarcomas, 336  
 ligand binding domain, 25  
 limb salvage surgery, for soft tissue sarcoma, 338  
 liposarcoma, 336  
 liposomal doxorubicin, 11  
   PPE from, 8  
 lips  
   cancer of, 104  
   five-year survival rate, 105t  
   radical radiotherapy for, 105  
 liver  
   anatomy, 141  
   chemoradiotherapy tolerance dose for pancreatic tumour, 155  
   function assessment before chemotherapy, 5

Cambridge University Press

978-0-521-61816-8 - Practical Clinical Oncology

Edited by Louise Hanna, Tom Crosby and Fergus Macbeth

Index

[More information](#)

## Index

- isolated metastases from colorectal cancer
  - in-situ destructive therapies, 168
  - palliative chemotherapy, 169
  - surgery for, 168
- radiotherapy for lymphoma, 362
- liver cancer, 141–145
  - angiosarcoma, polyvinyl chloride monomers and, 145
  - in children, 440
  - clinical presentation, 142
  - diagnostic and staging investigations, 142
  - incidence and epidemiology, 141
  - metastatic disease, treatment, 447
  - pathology, 142t
  - prognosis, 145
  - radiotherapy, 144
  - risk factors and aetiology, 141
  - systemic therapy, 144
  - TNM classification, 143t
  - treatment
    - local non-surgical therapy, 144
    - overview, 143
    - surgery, 143
    - tumour types, 142t
- lobectomy, for thyroid cancer, 409
- lobular carcinoma in situ (LCIS), 196
- lomustine, 11
- loperamide
  - for diarrhoea, 87
- lorazepam
  - for anticipatory nausea, 7
- lung
  - radiotherapy for lymphoma, 362
  - radiotherapy impact in children, 430
- lung cancer. *See also* non-small cell lung cancer (NSCLC); small cell lung cancer
  - areas of current interest and clinical trials, 324
  - brachytherapy for, 323
  - clinical presentation, 315–316
  - endobronchial intervention, 75t
  - external beam radiotherapy (EBRT), 322
  - incidence and epidemiology, 313
  - investigations, 316
  - metastatic disease, treatment, 447
  - mortality statistics, 313
  - non-small cell (NSCLC), 16
  - pain from, 316
  - palliative care for, 313, 323
  - pathology, 314, 315
  - prognosis, 324
  - radiotherapy, side effects, 323t
  - rare tumour types, 325
    - bronchial carcinoid, 325
    - thymoma, 325
  - risk factors and aetiology, 313
  - spread, 315
  - staging, 317
  - tumour types, 313
- lungs
  - anatomy, 314
  - tumour types, 314t
- luteinising hormone releasing hormone (LHRH) agonists, 31
  - new options, 36
- lymph nodes
  - in bladder cancer, 227
  - in breast cancer
    - dissection in treatment, 198
    - histopathological assessment, 193
    - radiotherapy for, 200
  - drainage from lungs, 314
  - elective dissection (ELND), 399
  - and endometrial carcinoma spread, 269
  - melanoma spread to, 397
  - oesophageal tumour spread to, 122
  - para-aortic, radiotherapy for cervical cancer, 285
  - prostate cancer spread to, 233
  - regional status and breast cancer
    - prognosis, 209
  - regions, 349
  - sentinel lymph node biopsy (SLNB), 399
  - and spread of anal cancer, 176
  - surgery for, 96
- lymphadenectomy
  - for cervical cancer treatment, 282
  - in endometrial carcinoma treatment, 270, 271
- lymphadenopathy
  - cervical, 119–120
- lymphatic drainage from breast, 190
- lymphoedema, and soft tissue sarcomas, 336
- lymphoma
  - treatment protocol importance, 1
  - and tumour lysis syndrome (TLS), 80
- lymphomas. *See also* Hodgkin lymphoma (HL)
  - aetiology, 347
  - basics, 347
  - in children, 431
  - clinical presentation, 347
  - CNS prophylaxis in, 350
  - diffuse large B-cell
    - clinical presentation, 351
    - prognosis, 353
    - risk of relapse, 350
    - treatment flow chart, 351
    - treatment for advanced stage, 352
    - treatment for early stage, 351
    - treatment for relapsed/refractory disease, 352
    - treatment overview, 351
- extranodal marginal zone B cell, 357
  - managing, 357
  - prognosis, 358
- follicular, 354
  - clinical presentation, 354
  - clinical trials, 356
  - management plan, 354
  - managing, 356
  - prognosis, 354
  - treatment flow chart, 355
  - treatment of advanced, 354
  - treatment of localised, 354
  - treatment of relapsed, 356
- investigation and staging, 349
- mantle cell
  - clinical presentation, 356
  - prognosis, 357
  - treatment, 357
- mycosis fungoides (MF), 358
  - managing, 358
  - prognosis, 358
- PET scanning for, 350
- pretreatment assessment, 350
- primary CNS
  - clinical presentation, 353
  - investigation, 353
  - management, 353
- primary mediastinal B-cell
  - clinical presentation, 353
  - prognosis, 353
  - treatment, 353
- radiotherapy for
  - extended field, 362
  - involved field, 361
- staging classification, 349t
- thyroid, 416
- treatment
  - late complications, 363
  - WHO classification, 348
- lymphosarcoma, 393
- lymphovascular invasion, and risk of testicular cancer relapse, 246
- MabThera® (rituximab). *See* rituximab (MabThera®)
- macular degeneration, radiotherapy for, 451
- magnesium
  - cisplatin impact on excretion, 5
- magnesium hydroxide
  - for constipation, 85
- male. *See also* prostate cancer
  - bladder anatomy, 222
  - breast cancer, 208
  - hypothalamic-pituitary-gonadal axis in, 24
- malignant fibrous histiosarcoma, 336
- malignant spinal cord
  - and cauda equina compression, 72–73

## Index

- mammography  
   for breast cancer screening, 193  
   finding in DCIS, 195
- Manchester Interstitial System  
   for brachytherapy, 52
- Manchester score, 321
- mantle cell lymphoma  
   clinical presentation, 356  
   prognosis, 357  
   treatment, 357
- mantle field, radiotherapy for lymphoma, 362
- margins for skin cancer, 386
- Marjolin's ulcer, 383
- Masoaka staging system, 325, 326t
- mastectomy  
   vs. breast conserving surgery, 204  
   breast reconstruction after, 198  
   modified radical, 197  
   radiotherapy after, 199
- maxillary antrum  
   anatomy, 113  
   carcinoma of, 113–115  
     clinical presentation of, 113  
     CT-planned radical radiotherapy treatment, 115  
     five-year survival rate, 115t  
     investigation and staging, 114  
     pathology, 113  
     prognosis, 115  
     radiotherapy, 114  
     surgery for, 114  
     TNM summary of staging, 114t  
     treatment overview, 114
- maximally tolerated dose (MTD), 56
- mechlorethamine  
   reaction from, 81t
- mediastinal pain, from lung cancer, 316
- mediastinum  
   anatomy, 314  
   radiotherapy for lymphoma, 361
- Medicines and Healthcare Products  
   Regulatory Agency (MHRA), 64
- Medicines Compendium, 13
- medroxyprogesterone acetate  
   for breast cancer treatment, 29  
   for prostate cancer, 35
- medullary thyroid cancer, 407  
   clinical presentation, 414  
   external beam radiotherapy (EBRT), 414  
   follow up, 415  
   incidence and epidemiology, 414  
   prognosis, 415  
   risk factors and aetiology, 414  
   spread, 414  
   treatment, 414  
   treatment of recurrent, 415
- medulloblastoma  
   in children, 435  
   treatment, 374
- megestrol acetate, 27  
   for breast cancer treatment, 29  
   for prostate cancer, 35
- melanocytic naevi, and cutaneous melanoma risk, 395
- melanoma. *See also* cutaneous melanoma  
   annual incidence in different populations, 396t  
   basics, 395  
   IFNa in adjuvant management of, 14  
   ocular  
     clinical features and spread, 403  
     incidence and epidemiology, 403  
     investigation, 403  
     treatment, 403  
   melanoma antigen expression family (MAGE)  
     as potential vaccine target, 21  
   melphalan, for myeloma, 365  
   meningioma, treatment, 374, 377  
   Merkel cell carcinoma, 392
- mesothelioma  
   basics, 328  
   pleural  
     areas of current interest, 333  
     chemotherapy, 332  
     clinical presentation, 330  
     clinical trials, 333  
     compensation, 332  
     incidence and epidemiology, 328  
     investigation and staging, 330  
     palliative care, 332  
     pathology, 329t  
     prognosis, 332  
     radiotherapy, 332  
     risk factors and aetiology, 328  
     spread, 330t  
     staging classification, 330, 331  
     surgery, 331  
     treatment overview, 330
- meta-analysis, 66
- metabolic emergencies, 70
- metastatic disease. *See also* cancer of  
   unknown primary (CUP)  
   from anal cancer, 176  
   from bladder cancer, 224  
   in brain, treatment, 375  
   breast cancer and, 194  
   from colorectal cancer (CRC), isolated  
     liver metastases, 168  
   endometrial carcinoma, 274  
   pancreatic carcinoma, chemotherapy for, 156  
   from prostate cancer, 233  
     hormonal therapies for palliative care, 238  
   radiotherapy for palliative care, 238  
   renal cell carcinoma, 14  
   soft tissue sarcomas, 340  
   testicular cancer, 249  
   from thyroid cancer, 412
- metastatic melanoma  
   IFNa for, 14  
   IL-2 for, 14
- methotrexate, 11  
   for breast cancer treatment, 202  
   for childhood cancer,  
     neuropsychological/cerebral effects, 430  
   for diffuse large B-cell lymphoma, 352  
   for gestational trophoblast tumours (GTT), 307, 310  
   for mantle cell lymphoma, 357  
   for osteosarcoma, 343  
   for primary CNS lymphoma, 353  
   reaction from, 81t  
   renal toxicity, 8  
   for vulval cancer, 300
- metoclopramide, 86t  
   for treating nausea from chemotherapy, 7
- metronidazole, for *H. pylori* infection  
   eradication, 357
- midazolam, 76
- middle ear  
   anatomy, 118  
   carcinoma of  
     clinical examination, 118  
     investigation and staging, 118  
     prognosis, 119  
     radical radiotherapy for, 119  
     spread, 118  
     surgery for, 119  
     treatment overview, 119
- mitomycin, 11  
   antidotes for extravasation, 81t  
   for bladder cancer treatment, 225  
   for cholangiocarcinoma palliative care, 148  
   reaction from, 81t
- mitomycin C  
   neutropenia from, 6
- mitozantrone, 11
- mixed müllerian tumour, 275
- moderate benefits  
   expectations from treatment, 56
- Mohs' micrographic surgery, 385
- molar pregnancy, 304  
   incidence, 305  
   indications for further treatment, 306  
   invasive, 306  
   risk factors, 305  
   screening after, 305
- monoclonal antibodies  
   classification and nomenclature, 18t  
   for metastatic colorectal cancer, 169



- monoclonal gammopathy of  
   undetermined significance  
   (MGUS), 363
- mood changes  
   as ADT adverse effect, 34
- morphine, 83  
   dose calculation, 85  
   potencies, 85t
- mouth. *See* oral cavity
- mouth floor  
   cancer of  
     radical radiotherapy for, 105
- MRI scans  
   for neuroendocrine tumours (NETs),  
     421  
   for prostate cancer, 233  
   for radiotherapy planning, 40  
   for rectal cancer staging, 163
- mucin 1 (MUC1)  
   as potential vaccine target, 21
- Muir-Torre syndrome, 383  
   and breast cancer, 192
- mustine, for Hodgkin lymphoma, 359
- myasthenia gravis, thymomas and, 325
- mycosis fungoides (MF), 358  
   managing, 358  
   prognosis, 358
- myelogenous leukaemia  
   chronic, 14
- myeloma  
   clinical presentation, 364  
   diagnosis and new definitions, 364  
   incidence and epidemiology, 364  
   investigation and staging, 364  
   pathology, 364  
   risk factors and aetiology, 364  
   treatment  
     chemotherapy, 365  
     overview, 365  
     radiotherapy, 365
- naevoid basal cell carcinoma syndrome,  
   383
- nasal cavity  
   anatomy, 115  
   carcinoma of  
     clinical presentation of, 115  
     investigation and staging, 115  
     pathology, 115  
     radical radiotherapy for, 116  
     spread, 115  
     surgery for, 115  
     TNM classification, 116t
- nasopharynx  
   anatomy, 110  
   carcinoma of, 110–113  
     chemotherapy, 112  
     clinical presentation, 111  
     diagnosis and staging, 111
- five-year survival rate, 113t  
   incidence and epidemiology, 111  
   prognosis, 113  
   radiotherapy, 112–113  
   risk factors and aetiology, 111  
   TNM classification, 111t  
   treatment overview, 111  
   tumour types, 110
- National Cancer Institute (USA)  
   on cancer vaccines, 21
- National Cancer Research Network  
   (NCRN), 65
- National Comprehensive Cancer Network  
   (NCCN), 19, 201
- National Institute for Health and Clinical  
   Excellence (NICE), childhood  
   cancer guidelines, 440
- National Institute of Health (NIH), 201
- National Translational Cancer Research  
   Network (NTRAC), 66
- nausea and vomiting  
   from chemotherapy, 7  
   managing, 84
- neck. *See also* head and neck tumours  
   radiotherapy for lymphoma, 361
- neoadjuvant chemotherapy  
   for head and neck tumours, 98
- neobladder, orthotopic, 226
- neuroblastoma, 436  
   in children, 436
- neuroendocrine tumours (NETs)  
   areas of current interest, 424  
   basics, 408t  
   clinical presentation, 419  
   carcinoid syndrome, 419  
   clinical trials, 424  
   incidence and epidemiology, 418  
   investigation and staging, 420  
     biochemistry, 420  
     radiological and nuclear imaging,  
       421  
   metastases at presentation by primary  
     site, 419t  
   pathology, 419  
   prognosis, 424  
   risk factors and aetiology, 418  
   spread, 419  
   treatment, 421  
     chemotherapy, 423  
     drug therapy, 422  
     embolisation and radiofrequency  
       ablation, 423  
     radionuclide therapy, 423  
     surgery, 421  
   tumour types, 418
- neurofibromatosis type 1, and soft tissue  
   sarcomas, 335
- neurokinin A, neuroendocrine tumours  
   (NETs) and, 420
- neutropenia  
   chemotherapy and, 5, 6
- neutropenic fever  
   and sepsis, 77
- Nexavar® (Sorafenib). *See* sorafenib  
   (Nexavar®)
- NHL. *See* non-Hodgkin lymphoma (NHL)
- nipple, changes in breast cancer, 194
- nodular lymphocyte predominant  
   Hodgkin lymphoma (HL), 401t
- nodular melanoma (NM), 396
- non-coplanar beams  
   in radiotherapy, 43
- non-Hodgkin lymphoma (NHL), 347  
   CHOP chemotherapy for high-grade  
     B-cell, 2  
   in children, 432  
   prognostic index, 349  
   rituximab for, 19  
   in thyroid, 407
- non-maleficence  
   decision making and, 91
- non-receptor tyrosine kinases, 15
- non-rhabdomyosarcomas, in children,  
   440
- non-small cell lung cancer (NSCLC), 16,  
   315  
   areas of current interest and clinical  
     trials, 324  
   external beam radiotherapy (EBRT), 322  
   prognosis, 324  
   stage groups with five-year survival, 318t  
   staging, 317  
   treatment, 317–321  
     chemoradiotherapy for stage III, 319  
     chemotherapy after surgery for stages  
       I and II, 318  
     chemotherapy for stage III, 318  
     chemotherapy for stage IV, 320  
     chemotherapy with radiotherapy for  
       stages III, 319  
     palliative radiotherapy for stage III,  
       319  
     palliative radiotherapy for stage IV,  
       319  
     radiotherapy for stage III, 319  
     radiotherapy for stages I and II, 317  
     recurrent disease, 317–321  
     survival after palliative treatment,  
       324t  
     survival after radiotherapy, 324t
- non-steroidal antiandrogens (NSAAs), 34  
   for prostate cancer treatment, 237
- non-steroidal hormones, 23
- North London Cancer Network, 4
- nose. *See* nasal cavity
- Nottingham prognostic index (NI), 209
- nuclear medicine  
   in radiotherapy planning, 40

## Index

- obesity, and breast cancer incidence, 191  
 occupational factors, in renal cell carcinoma, 214  
 octreotide  
   for diarrhoea, 87  
   for neuroendocrine tumours (NETs), 422  
 ocular melanoma  
   clinical features and spread, 403  
   incidence and epidemiology, 403  
   investigation, 403  
   treatment, 403  
 odynophagia  
   managing, 97  
 oesophageal cancer  
   adenocarcinoma increase, 121  
   areas of current interest  
     dose of radiotherapy, 130  
   clinical presentation, 123  
   clinical trials, 130  
   incidence and epidemiology, 121  
   investigation and staging, 123  
   pathology, 122, 123t  
   prognosis, 130  
   radiotherapy beam direction, 43  
   risk factors and aetiology, 121  
   small cell carcinoma, 130  
   spread, 122  
   staging classification, 124t  
   treatment  
     definitive chemoradiotherapy, 126  
     overview, 124  
     palliative care, 129  
     postoperative adjuvant therapy, 125  
     preoperative chemoradiotherapy, 126  
     preoperative chemotherapy, 125  
     radiotherapy and chemoradiotherapy technique, 126–128  
     radiotherapy side effects, 129t  
     of recurrent, 128  
     surgery for non-metastatic, 125  
   tumour types, 121, 122t  
 oesophageal-pharyngeal syndrome, 9  
 oesophagus  
   anatomy, 121, 123  
 oestrogen  
   effects, 25  
   receptors (ERs), 24, 25  
     activation domains, 203  
   synthesis, 23  
 omeprazole, for *H.pylori* infection eradication, 357  
 Oncotype DX Recurrence Score, 202  
 ondansetron, 86t  
   for treating nausea from chemotherapy, 7  
 opioids toxicity, 83  
 optic nerve  
   shielding in radiotherapy, 113  
 oral cavity  
   anatomy, 103  
   carcinoma of, 103–106  
     five-year survival rate, 105t  
     investigation and staging, 103  
     radical radiotherapy for, 104  
     TNM classification, 104t  
     treatment, 104  
 oral chemotherapy  
   and over-compliance, 9  
 oral contraceptives (OCs), and breast cancer incidence, 191  
 oral mucositis  
   managing, 97  
 orathecin, for pancreatic cancer treatment, 156  
 orbital pseudotumour, radiotherapy, 451  
 organs  
   movement during radiotherapy, 46  
 organs at risk (ORs, OARs), 41  
   chemoradiotherapy doses for pancreatic tumour, 155  
   delineating, 42  
   doses to, 45  
   in critical analysis, 48  
 oropharynx  
   anatomy, 106  
   carcinoma of, 106  
     five-year survival rate, 108t  
     investigation and staging, 106  
     radical radiotherapy for, 107  
     surgery for, 106  
     TNM summary of staging, 106t  
 orthotopic neobladder, as cystectomy option, 226  
 osteopenia, from radiotherapy for childhood cancer, 429  
 osteoporosis  
   from radiotherapy for childhood cancer, 429  
   risk factors for, 28  
 osteosarcomas, 335. *See also* bone tumours  
   in children, 438  
 outcome measure  
   choosing for research, 58  
 ovarian cancer  
   paclitaxel and carboplatin for treating, 3  
 ovaries, 260  
   borderline tumours, 264  
   cancer, 257  
     incidence and epidemiology, 257  
   epithelial-stromal tumours, 257–264  
     areas of current interest, 263  
     chemotherapy, 261–262  
     classification, 257  
     clinical presentation, 259  
     clinical trials, 264  
     fertility sparing treatment, 260  
   hormone therapy, 263  
   investigation and staging, 259  
   palliative care, 263  
   pathology, 258  
   prognosis, 263  
   recurrent disease, 262  
   risk factors and aetiology, 257  
   screening and prevention, 259  
   spread, 258  
   surgery, 260  
   treatment overview, 259  
   function suppression, 26  
 germ cell tumours, 265  
   classification, 257  
 granulosa cell tumours, 264  
 pseudomyxoma peritonei, 264  
 radiotherapy impact in children, 430  
 sex cord-stromal tumours, classification, 257  
 tumour types, WHO classification, 257  
 over-compliance  
   with oral chemotherapy, 9  
 oxaliplatin, 12  
   for cholangiocarcinoma palliative care, 148  
   for colorectal cancer (CRC), 164, 173t  
   for palliative care, 169  
   for liver metastases, 169  
   oesophageal-pharyngeal syndrome from, 9  
   for pancreatic cancer treatment, 156  
   reaction from, 81t  
 oxycodone, 85t  
 paclitaxel,  
   anaphylaxis from, 79  
   antidotes for extravasation, 81t  
   for breast cancer treatment, 202  
   for cervical cancer treatment, palliative care, 286  
   for endometrial carcinoma, 273  
   for epithelial-stromal tumours, trials, 261–262  
   for non-small cell lung cancer, 320  
   for ovarian cancer treatment, 3, 261, 262  
   for recurrent disease, 262  
   summary of trials, 261  
   peripheral neuropathy from, 263  
   reaction from, 81t  
 paediatrics. *See* childhood cancer  
 Paget's disease, 208, 341  
   prognosis, 344  
 pain  
   from lung cancer, 316  
   in breast, 34  
 pain control, 83  
   non-pharmacological methods, 84, 86t  
   pharmacological methods, 83

## Index

- palladium-103  
 properties, 51  
 palliative care  
   for anal cancer, 180  
   anorexia, 87  
   anti-emetic prescribing, 84  
   areas of current interest, 91  
   ascites, 88  
   bone tumours, 344  
   changing model, 83  
   changing role of, 83  
   chemotherapy, 1  
     for bile tract cancer, 148  
     for bladder cancer, 228  
     for cervical cancer, 286  
     for colorectal cancer, 169  
     for gastric cancer, 137  
     for head and neck tumours, 99  
     for liver metastases from colorectal cancer, 168  
     for metastatic or inoperable pancreatic tumour, 156  
     for penile cancer, 256  
   communication issues, 89–91  
     speed of information sharing, 90  
   constipation, 85  
   diarrhoea, 87  
   doxorubicin for liver cancer, 144  
   dysphagia, 87  
   for epithelial-stromal ovarian cancers, 263  
   ethical decision making, 91  
   financial considerations, 91  
   last 48 hours of life, 89  
   for lung cancer, 313, 323  
   for mesothelioma, 332  
     radiotherapy, 332  
   for nasopharynx tumours, 113  
   for non-small cell lung cancer, 319  
     radiotherapy, 319  
   for oesophageal cancer, 129  
   ongoing research, 92  
   pain control, 83  
     non-pharmacological methods, 84, 86t  
     pharmacological methods, 83  
   for pancreatic cancer, surgery for, 154  
   pleural effusions, 87  
   for prostate cancer  
     hormonal therapies for metastatic disease, 238  
     radiotherapy for metastatic disease, 238  
   psychological symptoms, 88  
     anxiety, 88  
     confusion and delirium, 88  
     depression, 88  
   radiotherapy  
     for bladder cancer, 228  
     for cervical cancer, 286  
     for gastric cancer, 139  
     for pancreatic tumour, 156  
     for rectal cancer, 168  
     for relapsed testicular cancer, 250  
   for renal cell cancer  
     cytokine therapy, 218  
     nephrectomy, 217  
     radiotherapy, 218  
   surgery, for advanced rectal cancer, 168  
   syringe drivers, 89  
 palmar-plantar erythrodysaesthesia (PPE)  
   from chemotherapy, 8  
 pamidronate, 207  
 Pancoast tumour, 322  
 pancreas  
   anatomy, 151  
   carcinoma, 151  
     areas of current interest, 156  
     chemoradiotherapy for locally advanced disease, 155  
     chemotherapy and chemoradiation, 154  
     chemotherapy and chemoradiation for locally-advanced disease, 155  
     chemotherapy for metastatic or inoperable pancreatic tumour, 156  
     clinical features, 152  
     endoscopic relief of obstruction, 156  
     imaging, 153  
     incidence and epidemiology, 151  
     investigation and staging, 153  
     ongoing/planned trials, 157t  
     pathological features, 152t  
     radiotherapy for palliative care, 156  
     stage groups, 154t  
     staging classification, 153  
     surgery for, 154  
     TNM classification, 154t  
     treatment overview, 153  
     types, 151, 152t  
   carcinoma of exocrine  
     clinical presentation of, 152  
     pathology, 151  
     risk factors and aetiology, 151  
   neuroendocrine tumours (NETs), 420  
     chemotherapy, 423  
     incidence and clinical features, 420t  
     surgery, 422  
 pancreatic duct, 151  
 pancreatico-duodenectomy (Whipple's procedure), 154  
 Papanicolaou (Pap) smear, 279  
   treatment following, 279t  
 papillary cancers of thyroid, 406  
 para-aortic field, radiotherapy for  
   lymphoma, 362  
 parallel organs  
   and radiation therapy planning, 42  
 paraproteinaemias, classification, 363  
 parietal pleura, 328  
 Paris system  
   for brachytherapy dosimetry, 51  
 parotid gland  
   anatomy, 116  
   carcinoma of  
     CT-planned radiotherapy treatment, 118  
   tumours  
     post operative radiotherapy, 117  
     treatment overview, 117  
 partial breast irradiation (PBI), 200  
 patents  
   rights in clinical trials, 63  
 Paterson-Parker system  
   for brachytherapy, 52  
 patient  
   communication with, 89–91  
 patient information sheet, 64  
 PDGFR tyrosine kinases  
   Imatinib activity against, 15  
 pegylated G-CSF (Neulasta®)  
   for neutropenia, 6  
 pegylated liposomal doxorubicin  
   hydrochloride (PLDH), for ovarian cancer treatment, for recurrent disease, 262  
 pelvis  
   carcinoma of renal, 220  
   pain in ovarian cancer, palliative care for, 263  
   treatment in prostate cancer, 236  
 pemetrexed  
   for mesothelioma, 332  
 penis  
   cancer  
     chemotherapy, 256  
     diagnostic and staging, 252  
     incidence and epidemiology, 252  
     pathology, 252  
     risk factors and aetiology, 252  
     TNM classification, 253t  
     treatment of carcinoma in situ, 253  
     treatment overview, 253  
 invasive squamous cell carcinoma  
   radiotherapy, 254  
   treatment, 253  
 management of groin nodes, 254  
   clinically and radiologically negative groin, 254  
   clinically involved nodes, 255  
   management following surgery, 255  
   tumour types, 253t  
 peptide growth factor receptor pathways  
   in breast cancer cells, 30  
 peptide-based vaccines, 20  
 percentage depth dose, 42

## Index

- pericardium, involvement by  
   mesothelioma, 328
- perihilar tumours, Bismuth classification  
   for, 146t
- peripheral carcinoid, 325
- peripheral PNETs, in children, 438
- peritoneum, involvement by  
   mesothelioma, 328
- permuted block randomisation, 57
- PET. *See* positron emission tomography (PET)
- Peutz-Jeghers syndrome, and breast cancer, 192
- Peyronie's disease, radiotherapy, 451
- pharynx  
   carcinoma of posterior wall  
     radical radiotherapy for, 108
- Phase I trials, 55
- Phase II trials, 56
- Phase III trials, 56
- Phase IV trials, 56
- phlebitis  
   from chemotherapy, 8
- photodynamic therapy (PDT)  
   for oesophageal cancer, 129  
   for skin cancer treatment, 385
- photons  
   percentage depth doses fo 195kV, 388t  
   percentage depth doses fo 95kV, 387
- PIAF regimen, for liver cancer treatment, 144
- PICC line  
   for chemotherapy, 5
- pineal tumours, 371
- treatment, 375
- pineocytoma, treatment, 377
- piperacillin  
   for neutropenia, 6
- pituitary tumours, 371
- radiotherapy plan for adenoma, 376
- treatment, 375, 377
- placebo  
   and blinding, 59
- placental site trophoblast tumour (PSTT), 304, 307
- managing, 309
- planning organ at risk volume (PRV), 41
- planning target volume (PTV), 41
- forming, 42
- plasma chromogranin A, neuroendocrine tumours (NETs) and, 420
- plasmacytoma, solitary, 366
- platinum compounds  
   reaction from, 81t
- platinum-based chemotherapy  
   allergy to, 263  
   for cervical cancer, 281  
   for ovarian cancer treatment, 261, 262t  
   for recurrent disease, 262
- platinums,  
   hypersensitivity and anaphylaxis from, 9
- pleura  
   anatomy, 328  
   tumour types, 328, 329t
- pleural effusions, 87
- in ovarian cancer, palliative care for, 263
- pleural mesothelioma  
   areas of current interest, 333  
   chemotherapy, 332  
   clinical presentation, 330  
   clinical trials, 333  
   compensation, 332  
   impact, 328  
   incidence and epidemiology, 328  
   investigation and staging, 330  
   palliative care, 332  
   pathology, 329t  
   prognosis, 332  
   radiotherapy, 332  
   risk factors and aetiology, 328  
   spread, 330t  
   staging classification, 330, 331  
   surgery, 331  
   treatment overview, 330
- pleuroperitoneal shunt, 332
- Plummer-Vinson syndrome, 122
- pneumonectomy, in mesothelioma  
   treatment, 331
- pneumonitis, bleomycin and, 247
- polycystic kidney disease, 214
- polycythaemia vera, radiotherapy, 452
- polyvinyl chloride monomers, and  
   angiosarcoma of the liver, 145
- porocarcinoma, malignant, 392
- positron emission tomography (PET)  
   for assessing impact of imatinib in GIST, 187  
   in Hodgkin lymphoma treatment, 359  
   in children, 432  
   for neuroendocrine tumours (NETs), 421  
   for prostate cancer, 233
- postmenopausal patients with breast cancer  
   adjuvant endocrine therapy for, 203  
   hormone therapy, 205
- potassium  
   cisplatin impact on excretion, 5
- power, 59
- PPE. *See* palmar-plantar erythrodyssaesthesia (PPE)
- prednisolone, 2, 35
- for diffuse large B-cell lymphoma, 351, 352  
   for Hodgkin lymphoma, 359  
   in children, 432  
   for myeloma, 365  
   for prostate cancer, 31
- pregnancy  
   and breast cancer, 207  
   cervical cancer in, 286  
   thyroid cancer and, 412
- premenopausal patients with breast cancer  
   adjuvant endocrine therapy for, 203  
   hormone therapy, 205
- pre-pubertal age group, cancers typically occurring, 427
- primary CNS lymphoma (PCNSL)  
   clinical presentation, 353  
   investigation, 353  
   management, 353
- primary mediastinal B-cell lymphoma  
   clinical presentation, 353  
   prognosis, 353  
   treatment, 353
- primitive neuroectodermal tumours (PNETs), in children, 435, 438
- procarbazine, 12
- for Hodgkin lymphoma, 359
- in children, 432
- progestagens, for endometrial carcinoma, 273
- progesterone receptor (PgR), 25
- role in hormone resistance, 30
- status measurement in breast cancer, 25
- progesterones  
   for renal cell cancer, 219
- intrauterine, in endometrial carcinoma  
     treatment, 270
- progestins  
   for breast cancer treatment, 29
- prophylactic antibiotics  
   for febrile neutropenia, 79
- prophylactic cranial irradiation  
   for small cell lung cancer, 322
- prostate cancer  
   adenocarcinoma  
     pathological features, 232t  
     TNM classification, 233t  
   androgen deprivation therapy for, 31  
   areas of current interest, 36, 239  
   basics, 231  
   clinical presentation  
     local symptoms, 233  
     lymph node spread or metastatic disease, 233  
   clinical trials, 239  
   hormonal therapies, 31, 237  
   incidence and epidemiology, 231  
   investigation and staging, 233  
   mechanisms of hormone resistance, 36  
   palliative care for  
     bisphosphonates, 238  
     hormonal therapies for metastatic disease, 238

## Index

- radiotherapy for metastatic disease, 238
- pathology, 231
- prognosis, 239
- radical radiotherapy plan for, 48
- risk factors and aetiology, 231
- screening for, 232
- spread, 232
- steroidal antiandrogens for, 35
- TNM T-staging classification, 233
- treatment
  - brachytherapy, 235
  - external beam radiotherapy (EBRT), 236–237
  - follow up after radiotherapy, 237
  - observation alone, 234
  - overview, 233
  - post operative adjuvant radiotherapy, 237
  - surgery, 234
- tumour types, 232t
- prostate gland, anatomy, 231
- prostate specific antigen (PSA)
  - as potential vaccine target, 21
  - after radical prostatectomy, 235
  - after radiotherapy, 237
  - screening, 232
  - surveillance, 234
- prostatectomy, radical, 234
- proto-oncogene KIT, and gastrointestinal stromal tumours (GIST), 183, 184
- pseudomyxoma peritonei, in ovaries, 264
- psychological symptoms, 88
  - anxiety, 88
  - confusion and delirium, 88
  - depression, 88
- pterygium, radiotherapy, 451
- puberty, cancers typically occurring, 427
- published research reports
  - assessing, 67
- pulmonary neuroendocrine tumours, 420
  - chemotherapy, 423
  - surgery, 422
- pulsed dose rate (PDR)
  - for brachytherapy, 53
- p-value, 59
- quality assurance
  - in brachytherapy, 53
  - in radiotherapy planning, 47
- quality of life
  - palliative chemotherapy and, 1
- quinolone antibiotic
  - for neutropenia prophylaxis, 6
- radial profile of beam, 42
- radical prostatectomy, 234
- radical radiotherapy
  - hormone therapy as adjunct, 32
- radiofrequency ablation (RFA)
  - for liver cancer, 144
  - for neuroendocrine tumours (NETs), 423
- radioisotope therapy for thyroid cancer, 410
- radiation protection issues, 411
  - side effects, 411
- radiolabelled antibodies, 19
- radionuclide therapy, for neuroendocrine tumours (NETs), 423
- radionuclides for brachytherapy
  - properties, 51
- radiotherapy, 244, 246
  - for anal cancer
    - chemotherapy combined with, 178
    - dose, fractionation and energy, 178
    - palliative care, 180
    - side effects, 178, 179
    - technique, 177
  - for bladder cancer, 226
    - applications, 226
    - beams, 227
    - doses, 227
    - palliative care, 228
    - setup, 226
    - use of CRT/IMRT, 227
  - for brain tumours, 376
    - toxicity, 378
  - for breast cancer treatment, 199
    - lymph nodes, 200
    - after mastectomy, 199
  - for cancer of unknown primary (CUP), 446
  - for cervical cancer treatment, 282–286
    - post operative, 285
  - for childhood cancer, 428
    - late consequences, 428
    - leukaemia, 431
    - side effects, 428
  - for CNS tumours, 377, 380
    - of craniospinal axis, 378
  - for diffuse large B-cell lymphoma, 352
  - for endometrial carcinoma, 271–273
    - post operative, 273
    - toxicity, 272
  - for Ewing's sarcoma, 344
  - for gastric cancer
    - with chemoradiotherapy, 138–139
  - for gastrointestinal stromal tumours (GIST), 186
  - for head and neck tumours, 96–98
    - concurrent with chemotherapy, 98
    - fractionation, 98
    - indications for postoperative, 97
    - intensity modulated (IMRT), 99
    - management of acute reactions, 97
    - nasal cavity, 116
    - nasopharynx, 112–113
    - of hypopharynx, 110
    - tongue, 105, 107, 108
- for Hodgkin lymphoma
  - advanced, 360
  - in children, 432
- hormone therapy as adjunct to radical, 32
- intensity modulated (IMRT), 47
- for invasive squamous cell carcinoma of penis, 254
- for liver cancer treatment, 144
- for lung cancer, side effects, 323t
- for lymphomas, involved field, 361
- for malignant spinal cord compression, 72
  - dose calculation, 73
- for MALT lymphoma, 357
- for mesothelioma, 332
- for middle ear carcinoma, 119
- for mouth floor cancer, 105
- for non-small cell lung cancer, 322
  - palliative for stage III, 319
  - palliative for stage IV, 319
  - for stage III, 319
  - for stages I and II, 317
- for oesophageal cancer
  - dose, 130
  - palliative care, 129
  - side effects, 129t
- for osteosarcoma, 343
- for primary CNS lymphoma, 353
- for prostate cancer, 236–237
  - definition of biochemical failure after, 237
  - dose calculation, 236
  - palliative care, 238
  - post operative adjuvant, 237
- for rectal carcinoma, 165, 166
- for renal cell cancer, 217
- for seminoma, 243
  - strips and doglegs technique, 245
  - toxicity, 246
- for skin cancer, 382, 385
  - dose calculation, 391
  - percentage depth doses fo 195kV photons, 388t
  - percentage depth doses fo 95kV photons, 387
- for small cell lung cancer
  - prophylactic cranial, 322
  - thoracic, 321
- for soft tissue sarcomas, 338–339
  - in children, 439
- for spinal tumours, 377
- for superior vena caval obstruction (SVCO), 73
- for thyroid cancer, 411
- for treating benign conditions, 449–452
- for vaginal carcinoma, 293–294
  - complications, 293

## Index

- radiotherapy (*cont.*)  
 for vulval cancer  
   post operative, 299  
   preoperative, 300  
   primary for inoperable disease, 300
- radiotherapy planning  
   beam arrangements, 43, 44  
   brachytherapy, 51–53  
   calculation cycle, 44  
   critical analysis, 48  
   doses to organs at risk (OARs), 45  
   electron beam isodoses, 49  
   examples requiring improvement, 48  
   for gastric cancer, 138  
   for head and neck tumours, 96  
     indications for postoperative, 97  
   imaging the patient, 40  
   inhomogeneities of density, 45  
   isodose plan - photons, 42  
   matching adjacent beams in complex treatments, 45  
   overview, 39  
   patient position and immobilisation, 39  
   quality assurance, 47  
   surface obliquity  
   target volumes definition, 41–42  
   verification, 46
- raloxifene, 30  
   and breast cancer prevention, 193
- randomisation  
   good practice in, 58
- randomised controlled trial (RCT),  
   55, 56
- rasburicase, 80  
   for lymphomas, 350
- receptor tyrosine kinases, 15
- recombinant human TSH (rhTSH), for  
   thyroid cancer, 412
- recombinant viruses, 21
- rectal carcinoma. *See also* colorectal  
   cancer (CRC)  
   adjuvant chemotherapy for, 165  
   early-stage, 165  
   radiotherapy  
     and chemoradiotherapy for, 165  
     dose, energy, fractionation, 167  
     patient instructions, 167  
     post operative, 166  
     practicalities, 166  
     preoperative, 166  
     side effects, 167  
   treatment for advanced/inoperable, 167  
   treatment for non-metastatic disease,  
     165
- red cell aplasia, thymomas and, 325
- rehabilitation  
   following radical treatment of head and  
   neck tumours, 99
- relative malignancy index (RMI), 259
- renal antigen expression family  
   as potential vaccine target, 21
- renal cell cancer, 17, 214. *See also* kidney  
   IL-2 for, 13  
   metastatic disease, 14  
   radical nephrectomy for, 216  
   risk factors and aetiology, 214  
   sorafenib for treating, 17
- renal pelvis, carcinoma of, 220
- reproductive factors, and breast cancer  
   incidence, 190
- research in cancer  
   assessing published reports of research,  
     67  
   clinical trials, 55–63  
   ethical considerations, 63–65  
   health economics, 65  
   randomised controlled trial (RCT), 55  
   research networks, 65  
   synthesising results, 66–67  
   translational research, 66
- research networks, 65
- residual para-aortic disease, 248
- restenosis, arterial, radiotherapy for, 449
- retinoblastoma, in children, 438
- retromolar trigone  
   cancer of  
     radical radiotherapy for, 105
- Revised European-American Lymphoma  
   (REAL) classification, 347
- rhabdomyosarcoma, 336  
   in children, 439
- rituximab (MabThera®), 2, 19  
   for diffuse large B-cell lymphoma, 351  
   for follicular lymphoma, 354  
   for mantle cell lymphoma, 357  
   for primary CNS lymphoma, 354
- Roach formula, 236
- Rockall score, 75, 76
- rodent ulcers, 383
- Royal Marsden Hospital (RMH) staging  
   system, for testicular cancer, 242
- ruthenium-106  
   properties, 51
- SAB (Same As Before)  
   in acute myeloid leukaemia, 57
- St. Gallen guidelines, 201
- salivary gland, 116–118  
   anatomy of parotid gland, 116  
   tumours  
     clinical presentation of, 117  
     five-year survival rate, 118  
     investigation and staging, 117  
     pathology, 116  
     post operative radiotherapy, 117  
     surgery for, 117  
     TNM classification, 117  
     treatment overview, 117
- salpingo-oophorectomy, 270
- Same As Before (SAB)  
   in acute myeloid leukaemia, 57
- sample size  
   factors impacting, 59
- sarcoma. *See also* soft tissue sarcomas  
   uterine, 275–276  
     treatment, 275  
     types, 275  
   WHO classification, 335
- Schwann cell tumours, 183
- schwannoma, 371
- scleral plaque therapy, for ocular  
   melanoma, 403
- scoliosis, from radiotherapy for childhood  
   cancer, 429
- screening  
   for breast cancer, 193  
   for colorectal cancer (CRC), 159, 160  
   for cutaneous melanoma, 396  
   for head and neck tumours, 94  
   after molar pregnancy, 305
- selection bias, 56
- selective serotonin reuptake inhibitors  
   (SSRIs), 88
- seminoma, 240  
   adjuvant chemotherapy, 244  
   adjuvant radiotherapy, 243  
   radiotherapy strips and doglegs  
     technique, 245  
   residual mass postchemotherapy, 249  
   spermatocytic, 241, 250  
   stage II, 244  
   surveillance, 243  
   treatment overview, 243
- senna  
   for constipation, 85
- sentinel lymph node biopsy (SLNB), 198,  
   399, 402
- sepsis  
   neutropenic, 6
- septic shock  
   initial management, 78
- serial organs  
   and radiation therapy planning, 42
- serial tomotherapy, 47
- serious adverse events  
   reporting, 64
- Sertoli cells, 250
- set-up margin (SM), 41
- sex cord stromal tumours  
   in ovaries, classification, 257  
   in testis, 250
- Sézary syndrome, 358
- sham surgery  
   in research, 59
- shields for radiotherapy  
   for skin cancer treatment, 386
- shoulder, pain from lung cancer, 316



## Index

- shunt, pleuroperitoneal, 332  
 SIADH (syndrome of inappropriate antidiuretic hormone), 71  
 side effects of chemotherapy, 1  
 sigmoidoscopy, for colorectal cancer screening, 161  
 signal to noise ratio, 59  
 signal transduction inhibitors, 31  
 significance level  
   of statistical testing, 59  
 Significant trial, 6  
 silence  
   in patient communications, 90  
 simple randomisation, 57  
 single beam, 43  
 single-blind trials, 58  
 skin  
   changes in breast cancer, 194  
   reaction to radiotherapy, 97  
 skin cancer  
   angiosarcoma, 393  
   basal cell carcinoma, 383  
     clinical presentation, 383  
     molecular pathogenesis, 383  
   basics, 382  
   dermatofibrosarcoma protuberans, 393  
   eccrine carcinoma, 392  
   incidence and epidemiology, 382  
   Kaposi's sarcoma, 392  
   lymphomas, 393  
   lymphosarcoma, 393  
   malignant fibrous histiocyte, 393  
   malignant porocarcinoma, 392  
   merkel cell carcinoma, 392  
   patient examination, 384  
   risk factors and aetiology, 383  
     genetic predisposition, 383  
   squamous cell carcinoma, 384  
   TNM classification, 384t  
   treatment  
     5-fluorouracil, 385  
     imiquimod 5%, 385  
     photodynamic therapy (PDT), 385  
     radiotherapy, 385  
     radiotherapy dose calculation, 391  
     surgery, 385  
   tumour types, 382  
 skin rash  
   from non-steroidal antiandrogens, 34  
   with anti-EGFR agents, 17  
 skull, tumours of base  
   treatment, 375  
   types, 371  
 small bowel, chemoradiotherapy  
   tolerance dose for pancreatic tumour, 155  
 small cell carcinoma, of cervix, 287  
 small cell lung cancer, 315  
   areas of current interest and clinical trials, 325  
   good prognosis patients, 321  
     chemotherapy, 321  
     prophylactic cranial irradiation, 322  
     thoracic radiotherapy, 321  
   intermediate and poor prognosis patients, 322  
   pathology, 315  
   prognosis, 324  
   staging, 317  
   staging system, 318t  
   treatment, general aspects, 321  
 smoking  
   as bladder cancer risk factor, 222  
   statistics, 313  
 sodium docusate  
   for constipation, 85  
 sodium retention  
   from DES, 35  
 soft palate  
   carcinoma of  
     radical radiotherapy for, 108  
 soft tissue sarcomas, 335  
   anatomy and pathology, 336  
   chemotherapy for, 339  
   in children  
     germ cell tumours, 440  
     hepatoblastoma, 440  
     hepatocellular carcinoma, 440  
     non-rhabdomyosarcomas, 440  
     rhabdomyosarcoma, 439  
   clinical presentation, 337  
   clinical trials, 340, 345  
   incidence and epidemiology, 335  
   investigation and staging, 337  
   metastatic disease, 340  
   prognosis, 340, 341t  
   radiotherapy, 338–339  
   recurrent disease, 340  
   risk factors and aetiology, 335  
   spread, 336  
   staging, 337  
   surgery, 338  
   TNM classification, 337t  
   treatment overview, 337  
   tumour types, 336  
 solitary plasmacytoma, 366  
 somatostatin analogue therapy, for  
   neuroendocrine tumours (NETs), 422  
 somatostatin receptor scintigraphy, for  
   neuroendocrine tumours (NETs), 421  
 sorafenib (Nexavar®), 16, 17  
   for renal cell cancer, 220  
 sperm storage, 8  
   before mantle radiotherapy, 363  
   before testicular cancer treatment, 249  
 spermatocytic seminoma, 241, 250  
 spinal cord  
   chemoradiotherapy tolerance dose for  
     pancreatic tumour, 155  
   compression, 70  
   tumour treatment, 376, 377  
 spindle cell sarcomas, 341  
 spine  
   radiotherapy, 377  
   toxicity, 378t  
   solitary plasmacytoma, 366  
 spleen, radiotherapy for lymphoma, 362  
 squamous carcinoma  
   anal cancer as, 175  
     pathological features, 175t  
   of lung, 315  
   of penis  
     radiotherapy, 254  
     treatment, 253  
   of skin, 382, 384  
     radiotherapy dose calculation, 391  
 squamous metaplasia, as bladder cancer  
   risk factor, 222  
 statutory sick pay (SSP), 91  
 stem cell transplantation  
   for follicular lymphoma, 356  
   for mantle cell lymphoma, 357  
   for myeloma, 365  
 stents  
   for oesophageal cancer, 129  
 stereotactic radiotherapy, for CNS  
   tumours, 380  
 steroidal antiandrogens  
   for prostate cancer, 35  
 steroidal hormones, 23  
 Stewart-Treves syndrome, 393  
   and soft tissue sarcomas, 336  
 stomach. *See also* gastric cancer  
   anatomy, 132  
   neuroendocrine tumours (NETs),  
     surgery, 422  
 stopping rules  
   for research trials, 65  
 streptozocin  
   reaction from, 81t  
 structural/obstructive emergencies,  
   72–77  
   acute airway obstruction, 74  
   bleeding, 75  
   cardiac tamponade, 77  
   malignant spinal cord and cauda equina  
     compression, 72–73  
   raised intracranial pressure, 74  
   superior vena caval obstruction (SVCO),  
     73–74  
   urinary obstruction, 76  
 study protocol, 63

## Index

- subglottis  
   carcinoma of  
     radiotherapy for, 103  
     TNM stages, 101  
     treatment, 102
- subgroups  
   in research, 61
- sunitinib (Sutent®), 16, 17  
   for gastrointestinal stromal tumours (GIST), 188  
   for renal cell cancer, 220
- sunlight, and cutaneous melanoma risk, 395
- sunscreens, 396
- superficial spreading melanoma (SSM), 396
- superior vena caval obstruction (SVCO), 73–74  
   lung cancer and, 316
- supraglottis  
   carcinoma of  
     radiotherapy for, 102  
     TNM stages, 101  
     treatment, 102
- surface epithelial-stromal tumours, in ovaries, 257
- surveillance  
   for prostate cancer, 234  
   for seminoma, 243  
   for testicular cancer relapse, 246
- suspected unexpected serious adverse reactions (SUSAR), 64
- Sutent® (Sunitinib), 17
- sweats  
   as ADT adverse effect, 34
- Swedish Rectal Cancer Trial, 166
- syndrome of inappropriate antidiuretic hormone (SIADH), 71
- synovial sarcoma, 336
- synovitis, radiotherapy, 451
- syringe drivers, 89
- talc pleurodesis, 331
- tamoxifen, 25, 30  
   vs. aromatase inhibitors (AIs), 29  
   and breast cancer prevention, 193  
   for breast cancer treatment, 26, 27, 203  
     ductal carcinoma *in situ* (DCIS), 196  
   IBCSG trials, 26  
   for liver cancer treatment, 145  
   for ovarian cancer treatment, 263  
   and radiation therapy, for breast cancer treatment, 199  
   randomised trials, 66  
   for renal cell cancer, palliative care, 219  
   toxicity data, 28
- Tarceva® (erlotinib). *See* erlotinib (Tarceva®)
- taxanes,  
   for non-small cell lung cancer, 320  
   hypersensitivity and anaphylaxis from, 9
- T-cell lymphoma  
   in children, 432  
   peripheral, risk of relapse, 350
- teenagers. *See* adolescents
- teeth, radiotherapy impact in children, 430
- tegafur-uracil (Uftoral®), in chemotherapy for colorectal cancer, 164
- temozolamide, for advanced cutaneous melanoma, 400
- temsirolimus, for renal cell cancer, 220
- teratoma, 240  
   ovarian, 265  
   testicular  
     British and American classification systems, 242  
     residual mass postchemotherapy, 248  
     stage I treatment, 246  
     treatment overview, 243
- 'terminal care' service  
   vs. palliative care, 83
- testes, radiotherapy impact in children, 430
- testicular cancer  
   basics, 240  
   BEP regimen, 2  
   clinical trials, 250  
   flat dosing of bleomycin for, 4  
   germ cell tumours  
     clinical presentation, 241  
     incidence and epidemiology, 240  
     investigation and staging, 241  
     pathology and classification, 240  
     risk factors and aetiology, 240  
     screening for, 240  
     spread, 241  
   intratubular germ cell neoplasia (IGCN), managing, 242  
   metastatic disease, 247–249  
   relapsed disease, 249  
     high dose chemotherapy (HDCT), 249  
     palliative care, 250
- seminoma  
   adjuvant chemotherapy, 244  
   adjuvant radiotherapy, 243  
   radiotherapy strips and doglegs technique, 245  
   residual mass postchemotherapy, 249  
   spermatocytic, 250  
   stage II, 244  
   surveillance, 243  
   treatment overview, 243
- sex cord stromal tumours, 250
- staging/prognostic grouping, 242
- teratoma  
   British and American classification systems, 242
- residual mass postchemotherapy, 248  
   stage I treatment, 246  
   treatment overview, 243
- treatment protocol importance, 1
- tumour types, 241t
- testosterone, 23  
   preventing rise in, 32
- TGF- $\beta$  receptor II  
   as potential vaccine target, 21
- thalidomide  
   for mantle cell lymphoma, 357  
   for myeloma, 365
- thoracic radiotherapy, for small cell lung cancer, 321
- thorotrast, 145, 214
- thrombocytopenia  
   chemotherapy and, 5
- thromboembolic disease  
   from steroidal antiandrogens, 35
- thymidine phosphorylase, 2
- thymoma, 325
- thyroglobulin, 413
- thyroid  
   anatomy, 406
- thyroid cancer  
   anaplastic  
     external beam radiotherapy (EBRT), 415  
     incidence and epidemiology, 415  
     prognosis, 415  
     spread, 415  
     treatment, 415
- basics, 406
- clinical trials, 416
- differentiated  
   areas of current interest, 413  
   chemotherapy, 412  
   clinical presentation, 408  
   external beam radiotherapy (EBRT), 411  
   follow up, 413  
   incidence and epidemiology, 408  
   investigation and staging, 409  
   prognosis, 413  
   radioisotope therapy, 410  
   risk factors and aetiology, 408  
   serum thyroglobulin, 409  
   surgery, 409  
   thyroxine for treating, 410  
   treatment overview, 409
- lymphomas, 416
- medullary  
   clinical presentation, 414  
   external beam radiotherapy (EBRT), 414  
   follow up, 415  
   incidence and epidemiology, 414  
   prognosis, 415  
   risk factors and aetiology, 414

## Index

- spread, 414  
 treatment, 414  
 treatment of recurrent, 415  
 pathology, 406  
 screening, 407  
 special clinical situations, 412  
 stage classification, 407  
 stage groupings, 408t  
 TNM classification, 408  
 treatment for recurrent, 412  
 tumour types, 406, 407t  
 thyroid eye disease, radiotherapy for, 450  
 thyrotoxicosis, radiotherapy, 452  
 thyroxine, for thyroid cancer, 410  
 tipafarnib, for pancreatic cancer treatment, 157  
 tiredness  
   as ADT adverse effect, 34  
 tissue  
   leakage of intravenous drugs from vein into, 80  
 tissue maximum ratio (TMR), 42  
 tissue phantom ratio (TPR), 42  
 tissue samples  
   consent for, 64  
 tobacco use  
   as bladder cancer risk factor, 222, 226  
   statistics, 313  
 toes  
   clubbing, 316  
 tongue  
   carcinoma of  
   radical radiotherapy for, 105, 107, 108  
   surgery for, 106  
   MRI of, 103  
 tonsil  
   carcinoma of  
   radiation fields for postoperative therapy, 107  
   surgery for, 106  
 topoisomerase 1 inhibitors,  
 topotecan, 12  
   for endometrial carcinoma, 274  
   for ovarian cancer treatment, for recurrent disease, 262  
   reaction from, 81t  
 total body irradiation (TBI), 366  
   for childhood cancer  
   leukaemia, 431  
   long-term side effects, 429, 430  
 total mesorectal excision (TME), 167  
 total skin electrons (TSE) beam therapy,  
   for mycosis fungoides, 358  
 trachea, 314  
   blockage of, 74  
 tramadol, 85t  
 transaminases  
   evaluating before chemotherapy, 5  
   trans-arterial chemo-embolisation (TACE), for liver cancer treatment, 144  
   transitional cell carcinomas (TCCs), 223  
   in prostate, 232  
   superficial, 224  
   translational research, 66  
   transplantation of liver, 143  
   transrectal ultrasound (TRUS) guided  
   systematic sampling, for prostate cancer, 233  
   transurethral resection (TURBT), 224  
   trastuzumab (Herceptin®), 3, 18  
   for breast cancer treatment, 3, 18, 204  
   clinical trials summary, 205  
   metastatic, 206  
   treated volume, 41  
   treatment  
   stages of development, 55  
   treatment-related emergencies  
   anaphylaxis related to anticancer drugs, 79  
   extravasation of chemotherapy, 80  
   neutropenic fever and sepsis, 77  
   tumour lysis syndrome (TLS), 79  
   trials. *See* clinical trials  
   Trojani grading system, 336, 337t  
   trophoblast disease  
   chemotherapy, 309t  
   investigation, 307  
   true smooth muscle tumours, 183  
   TSE (total skin electrons) beam therapy, 358  
   tuberous sclerosis, 214  
   and soft tissue sarcomas, 336  
   tumour  
   baseline assessment, 5  
   tumour lysis syndrome (TLS), 79  
   tumour markers  
   in cancer of unknown primary, 444  
   for testicular cancer, 241  
   measuring before chemotherapy, 5  
   tumour necrosis factor  $\alpha$ , 15  
   tumour-associated antigens, 20  
   as potential vaccine targets, 21  
   Turcot's syndrome, 160  
   tyrosine kinase inhibitors, 15  
   for renal cell cancer, 220  
   summary of clinical use and trials, 16  
   vascular endothelial growth factor  
   receptor, 17  
   tyrosine kinases, 15  
   UK MRC Guidelines, 64  
   ulcerative colitis (UC), and colorectal cancer, 160  
   ultraviolet radiation, and skin cancer, 382  
   United Kingdom Children's Cancer Study Group (UKCCSG), 426  
   registrations for children 15 and under in 2002, 427t  
   urethra, indications for removal in radical cystectomy, 226  
   urinary obstruction, 76  
   urothelial tumours, 223  
   uterus. *See also* endometrial carcinoma  
   cancer, incidence and epidemiology, 267  
   radiotherapy impact in children, 430  
   sarcoma, 275–276  
   treatment, 275  
   types, 275  
   tumour types, 267, 268t  
   vaccines, 20  
   for melanoma, 402  
   after radical nephrectomy, 218  
   vagina  
   anatomy, 290  
   carcinoma, 290  
   areas of current interest, 294  
   clinical presentation, 291  
   clinical trials, 294  
   histological features of squamous, 292t  
   incidence and epidemiology, 290  
   investigation and staging, 291  
   palliative care, 294  
   pathology, 290  
   prognosis, 294  
   recurrent disease, 294  
   risk factors and aetiology, 290  
   spread, 290  
   staging classification, 291, 292t  
   carcinoma treatment  
   follow up, 294  
   overview, 292  
   radiotherapy, 293–294  
   surgery, 292  
   tumour types, 290, 291  
   vaginal intraepithelial neoplasia (VAIN), 290  
   vaginal trachelectomy, for cervical cancer treatment, 282  
   vancomycin  
   for neutropenia, 6  
   vascular endothelial growth factor (VEGF), 159  
   vatalanib, 16  
   verrucous tumours, 252  
   video assisted thoracoscopic surgery (VATS), 331  
   vinblastine, 11  
   for Hodgkin lymphoma, 359  
   in children, 432  
   vinca alkaloids,  
   antidotes for extravasation, 81t  
   fatalities from, 8

Index

- vinca alkaloids (*cont.*)
  - phlebitis from, 8
  - reaction from, 81t
- vincristine, 2, 11
  - dose capping, 4
  - for diffuse large B-cell lymphoma, 351
  - for Ewing's sarcoma, 343
  - for gestational trophoblast tumours (GTT), 310
  - for Hodgkin lymphoma, 359
  - in children, 432
  - for mantle cell lymphoma, 357
  - for metastatic soft tissue sarcoma, 340
- vindesine, for diffuse large B-cell lymphoma, 352
- vinorelbine, 12
  - for non-small cell lung cancer, 320
- viral-protein based vaccines, 20
- visceral pleura, 328
- Vitamin D, and protection from melanoma, 396
- Vogelstein's model of carcinogenesis, 161
- vomiting. *See* nausea and vomiting
- Von Hippel-Lindau disease, 214
- vulva
  - anatomy, 296
  - carcinoma
    - areas of current interest, 301
    - chemoradiotherapy toxicity, 300
    - chemotherapy, 300
    - clinical presentation, 297
    - clinical trials, 302
    - five-year survival rate, 302t
    - investigation and staging, 297
    - palliative care, 301
    - pathological features of squamous, 298t
    - pathology, 296
    - post operative radiotherapy, 299
    - preoperative radiotherapy or chemoradiotherapy, 300
    - prognosis, 301
    - recurrent disease, 301
    - risk factors and aetiology, 296
    - spread, 296
    - staging classification, 297
    - surgery, 298
    - TNM classification, 298t
    - treatment overview, 297
  - incidence and epidemiology, 296
  - tumour types, 296, 297
- Waldenström's macroglobulinaemia, 363
- Waldeyer's Ring, radiotherapy for lymphoma, 361
- watchful waiting, for prostate cancer, 234
- web resources
  - BC Cancer Agency, 1
  - Medicines Compendium, 13
  - North London Cancer Network, 4
- wedges, 46
  - for beam arrangement, 43, 44
- weight
  - checking before chemotherapy, 5
- weight gain
  - as ADT adverse effect, 34
  - from non-steroidal antiandrogens, 34
- Wilm's tumour, in children, 437
- World Health Organisation
  - analgesic ladder, 83, 84
  - pain ladder, 70
  - palliative care, defined, 83
  - tumour classification
    - for CNS, 371, 372t
    - for ovaries, 257
  - tumour classification for nasopharynx, 110
- Xeloda® (capecitabine). *See* capecitabine (Xeloda®)
- Xeroderma pigmentosa, 383
- xerostomia, 97
- yolk sac tumour, 265
- zactima, 16
- zoledronic acid, 31, 71
  - for bone metastases, 207