Index

Note: Page numbers of article titles are in **boldface** type.

A

Acupuncture
  in clinical veterinary oncology, 838
Aminobisphosphonates
  in bone cancer pain management, 997
Analgesia/analgesics
  in veterinary cancer patients, 994–995
Anticonvulsant(s)
  in veterinary cancer patients, 995
Antimicrobial agents
  in veterinary cancer patients, 883–891
doxyacycline, 889–890
  in neutropenic patients, 883–884
    afebrile, 887–888
    febrile, 884–885
    special considerations, 885–886
  prophylactic uses, 886–887
  in radiation therapy patients, 888–889
  risk factors related to, 884
Antioxidant(s)
  in clinical veterinary oncology, 839–840

B

Bioactive polysaccharides: fungi
  in clinical veterinary oncology, 836–838
Biologic response modifiers, 927–928
Bladder tumor antigen test
  veterinary version of
    for canine hemangioendothelioma, 878
Bone cancer pain
  management of, 995–997
    aminobisphosphonates in, 997
    palliative radiation therapy in, 996
    radiopharmaceuticals in, 996–997
    SRT in, 996
    unique aspects of, 995–996

C

Calcitrol
  in clinical veterinary oncology, 839
Cancer(s)
  antimicrobial agents for, 883–891. See also Antimicrobial agents, in veterinary cancer patients
  development of
    neutering in, 965–975. See also Neutering, in cancer development
    MC in veterinary patients with, 817–829. See also Metronomic chemotherapy (MC)
  pain management for patients with, 989–1001. See also Pain management, in veterinary cancer patients
  vaccines for, 928–932

Cancer cells
  proteins in
dysregulation of, 895–896

Cancer screening tests
  for small animals, 871–881. See also specific tests and indications
    canine hemangiosarcoma, 878
    P-glycoprotein mutation, 879–880
    introduction, 871
    lymphomas, 872–877
    OncoPet RECAF, 878–879
    transitional cell carcinoma, 878

Chemotherapy
  metronomic. See Metronomic chemotherapy (MC)
  safety of
    in clinical veterinary oncology, 941–963
      compliance with
        state legislation mandating, 944
      exposure risks related to, 944–945
      routes of, 948–949
      hazard control and recommended health actions, 950–956
        administrative controls, 952–954
        eliminate/substitute hazard, 950–951
        engineering controls, 951–952
        personal protective equipment, 955–956
      health risks related to, 944–945
        evidence of, 945–948
        oral anticancer agents--related, 956–958
        protection motivation theory in, 943
        relevance of, 942–943
      history of, 941–942
    with surgery
      in multimodal cancer therapy for small animals, 859–860

Clinical trials
  in veterinary oncology, 977–987
    appropriate trial design/good clinical practice guidelines, 984–875
    barriers to, 983
    benefits of, 982
    drug development phases, 978–982
      defining adverse events and dose-limiting toxicities, 979–980
      phase I (client considerations), 980
      phase I (dose-finding), 979
      phase II (activity/efficacy), 980
Index

phase II (client considerations), 981
phase III (client considerations), 981
phase III (comparative), 981
phase IV, 982
phase O, 982
DSMB, 985
ethics/patient protection, 983
IACIC/CTRB, 985
introduction, 977–978
owner informed consent, 983–984
resources for, 985–986
role of, 977–987

Compliance
lack of
in chemotherapy safety, 943

Cytokine(s)
recombinant
in tumor immunotherapy, 928

D
DART. See Dynamic adaptive radiation therapy (DART)
Data Safety Monitoring Board (DSMB), 985
Dietary supplements
  in clinical veterinary oncology, 838–843. See also specific types
Doxycycline
  in veterinary cancer patients, 889–890
Drug development
  phases of, 978–982
DSMB. See Data Safety Monitoring Board (DSMB)
Dynamic adaptive radiation therapy (DART), 916–917

F
Fatty acids
  omega-3
    in clinical veterinary oncology, 840–841
Fungus(i)
  in clinical veterinary oncology, 836–838

G
P-Glycoprotein mutation
  for small animals, 879–880
Growth factors
  recombinant
    in tumor immunotherapy, 928

H
Hemangiocarcinoma
  canine
    screening tests for, 878
Hemangiosarcoma
  neutering in cancer development and, 968
Herbs/botanicals
  in clinical veterinary oncology
    in dogs or in vitro canine cells, 833–834
    in vivo or in vitro in other species, 834–836
Hormone(s)
  recombinant
    in tumor immunotherapy, 928

I
IACIC/CTRB. See Institutional Animal Care and Use Committee (IACIC)/Clinical Trials Review Board (CTRB)
IM. See Integrative medicine (IM)
Image-guided radiation therapy, 915–916
Immunity
  defined, 925
Immunology
  tumor, 926–927. See also Tumor immunology
Immunotherapy
  cancer vaccines, 928–932
  nonspecific tumor, 927–928
    biologic response modifiers, 927–928
  in veterinary oncology, 925–939
IMRT. See Intensity-modulated radiation therapy (IMRT)
Institutional Animal Care and Use Committee (IACIC)/Clinical Trials Review Board (CTRB), 985
Integrative medicine (IM)
  in clinical veterinary oncology, 831–853
    acupuncture, 838
    adverse reactions to, 843–844
    bioactive polysaccharides: fungi, 836–838
    dietary supplements, 838–843. See also specific types
    drug-herb interactions, 843–844
    herbs/botanicals
      in dogs or in vitro canine cells, 833–834
      in vivo or in vitro in other species, 834–836
    uses, 843
  defined, 831
  described, 831–833
  evidence-based
    in clinical veterinary oncology, 831–853
Intensity-modulated radiation therapy (IMRT)
  in veterinary radiation therapy, 913–914

L
Lymphoma(s)
  neutering in cancer development and, 968
  tests for, 872–877
PARRs, 877
Sensitest/Petscreen/Tri-Screen cLBT, 875–877
VDI TKcanine+, 872–874
VDI TKFeline, 874–875

M

Mammary tumors
neutering in cancer development and, 966–967

Manual point-dose calculations
in veterinary radiation therapy, 912–913

Mast cell tumors
neutering in cancer development and, 969

Mastinib
in veterinary oncology practice, 900–902
MC. See Metronomic chemotherapy (MC)

Megavoltage radiation therapy, 912

N-Methyl-D-aspartate (NMDA) antagonists
in veterinary cancer patients, 994

Metronomic chemotherapy (MC)
in humans, 821–822
in veterinary cancer patients, 817–829
biomarkers for, 822–824
challenges and future directions in, 822–825
clinical trials, 822
drug resistance to
development of, 825
introduction, 817–818
practical guidelines for, 825
side effects of, 824
targets of, 818–821
in tumor angiogenesis, 818–820
in tumor immunology, 820–821

Multimodal cancer therapy
for small animals
surgery in, 855–870. See also Surgery, in multimodal cancer therapy for small animals

Myo-inositol hexaphosphate
in clinical veterinary oncology, 842–843

N

Neutering
in cancer development, 965–975
hemangiosarcoma, 968
introduction, 965–966
lymphoma, 968
mammary tumors, 966–967
mast cell tumors, 969
osteosarcoma, 967–968
practitioner’s dilemma, 970–971
Neutering (continued)
  reproductive organ tumors, 967
  study result critiques, 970
  transitional cell carcinoma, 968
  lifespan effects of, 969–970
Neutropenia
  antimicrobial agents for, 883–884
  febrile
  antimicrobial agents for, 884–885
NMDA antagonists. See N–Methyl-D-aspartate (NMDA) antagonists
Nonsteroidal anti-inflammatory drugs (NSAIDs)
  in veterinary cancer patients, 994
Normal cell biology
  regulation of
  small molecule inhibitors in, 894–897
NSAIDs. See Nonsteroidal anti-inflammatory drugs (NSAIDs)

O
Omega-3 fatty acids
  in clinical veterinary oncology, 840–841
Oncology
  integrative medicine in, 831–853. See also Integrative medicine (IM), in clinical veterinary oncology
OncoPet RECAF
  for small animals, 878–879
Opioid(s)
  in veterinary cancer patients, 994
Osteosarcoma
  neutering in cancer development and, 967–968

P
Pain
  in veterinary cancer patients
    categorization of, 990–991
    pathophysiology of, 990
    recognition of, 991–992
Pain management
  in veterinary cancer patients, 989–1001. See also Pain, in veterinary cancer patients
    bone cancer pain–related, 995–997. See also Bone cancer pain, management of introduction, 989–990
    pharmacologic agents, 992–996
      analgesia/analgescs, 994–995
      anticonvulsants, 995
    general guidelines for, 992–994
    mechanisms of action of, 994–996
    NMDA, 994
    NSAIDs, 994
    opioids, 994
    TCAs, 995
  supportive care in, 997–998
Palliative radiation therapy
  in bone cancer pain management, 996
PARRs. See Polymerase chain reaction for antigen receptor rearrangements (PARRs)
Phytate
  in clinical veterinary oncology, 842–843
Phytic acid
  in clinical veterinary oncology, 842–843
Polymerase chain reaction for antigen receptor rearrangements (PARRs)
  for lymphoma, 877
Polysaccharides
  bioactive
    in clinical veterinary oncology, 836–838
Probiotics
  in clinical veterinary oncology, 841–842
Protection motivation theory
  in chemotherapy safety, 943
Protein(s)
  in cancer cells
dysregulation of, 895–896

R
Radiation
  normal tissue response to, 861–863
Radiation therapy
  advances in, 909–923
    biological principles and technical advances, 911–918
      for better tumor localization during planning, 914–915
      DART, 916–917
      image-guided radiation therapy, 915–916
      IMRT, 913–914
      manual point-dose calculations, 912–913
      megavoltage radiation therapy, 912
      SRT, 917–918
      3D-CRT, 913
    introduction, 909–910
  in cancer patients
    antimicrobial agents with, 888–889
  future directions in, 919–921
  image-guided, 915–916
  palliative
    in bone cancer pain management, 996
    past to present, 910–911
    with surgery
      in multimodal cancer therapy for small animals, 860–861
      surgery of tissue to be radiated, 863–867
Radiopharmaceuticals
  in bone cancer pain management, 996–997
Radiosurgery
  stereotactic, 917–918
    in bone cancer pain management, 996–998
Recombinant cytokines, growth factors, and hormones
  in tumor immunotherapy, 928
Reproductive organ tumors
  neutering in cancer development and, 967
Retinoid(s)
  in clinical veterinary oncology, 839

S
Safety
  chemotherapy-related
    in clinical veterinary oncology, 941–963. See also Chemotherapy, safety of, in clinical veterinary oncology
Sensitest/Petscreen/Tri-Screen cLBT
  for lymphoma, 875–877
Small molecule inhibitors
  kinase inhibitors
    human experience with, 895–897
  in veterinary oncology practice, 893–908. See also specific types
    agents under investigation, 902–903
    introduction, 893–894
    mastinib, 900–902
    in normal cell biology regulation, 894–897
    resistance to, 903–904
    toceranib, 898–900
SRT. See Stereotactic radiosurgery (SRT)
Stereotactic radiosurgery (SRT), 917–918
  in bone cancer pain management, 996–998
Surgery
  in multimodal cancer therapy for small animals, 855–870
    chemotherapy with, 859–860
    histopathologist in, 858–859
    preoperative evaluation, 856
    principles of, 857–858
    procedures, 856–857

T
TCAs. See Tricyclic antidepressants (TCAs)
3-dimensional conformal radiation therapy (3D-CRT)
  in veterinary radiation therapy, 913
3D-CRT. See 3-dimensional conformal radiation therapy (3D-CRT)
Toceranib
  in veterinary oncology practice, 898–900
Transitional cell carcinoma
  neutering in cancer development and, 968
  tests for
    in small animals, 878
Tricyclic antidepressants (TCAs)
  in veterinary cancer patients, 995
Tumor(s). See also specific types
  neutering and, 965–975. See also Neutering, in cancer development
Tumor immunology, 926–927
  cellular components of, 926
  immune evasion by tumors in, 927
  immune surveillance in, 926
Tumor immunotherapy. See Immunotherapy

V
Vaccine(s)
cancer, 928–932
VDI. See Veterinary Diagnostics Institute (VDI)
Veterinary Diagnostics Institute (VDI) TKcanine+
  for lymphoma, 872–874
Veterinary Diagnostics Institute (VDI) TKFeline
  for lymphoma, 874–875
Veterinary radiation therapy
  advances in, 909–923. See Radiation therapy, advances in