Index

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

A
Acanthomatous ameloblastoma
  in geriatric dogs and cats, 801
Acidosis
  local
    tumor-induced
      in geriatric dogs and cats, 741–742
Acupuncture
  for geriatric dogs and cats, 813–814
AD. See Alzheimer disease (AD)
Age
  as factor in cardiovascular disease in dogs and cats, 655–668. See also Cardiovascular disease, in geriatric dogs and cats
Aging
  of brain
    in dogs and cats
      cognitive ability effects of, 751–753
      nutritional care related to, 773–775
      cognitive dysfunction related to, 750–754
      effects of, 751
  in dogs and cats
    declining physiologic reserves and, 824–826
    described, 824
    hypothalamic-pituitary-thyroid axis effects on, 708–709
    nutritional requirements effects of, 771–773
    pathology of, 656
    physiologic changes associated with, 644–645
Alanine aminotransferase
  in canine chronic hepatitis
    interpretation of, 622
Alimentary neoplasia
  in geriatric dogs and cats, 693–706
    carcinoma/adenocarcinoma, 698–701
    feline intestinal mast cell tumor, 702
    lymphomas, 693–698
    mesenchymal tumors, 701–702
Alternative medicines
  for geriatric dogs and cats, 809–822
    acupuncture, 813–814
    arguments against, 810
    arguments in favor of, 810–813
Alternative medicines (continued)
  chiropractic, 814–816
  flower essences/Bach flowers, 819–820
  herbal medicines, 816–818
  homeopathy, 819
  introduction to, 809
Alzheimer disease (AD)
  in dogs and cats, 754
  research on
do cognitive dysfunction lessons learned from, 750–751
Ameloblastoma
  acanthomatous
  in geriatric dogs and cats, 801
American Veterinary Dental College (AVDC)
  position paper dental scaling without anesthesia, 806–807
  in staging of tooth resorption in geriatric dogs and cats, 795–797
Analgesia/analgesics
  for geriatric veterinary patients, 643–653
  complications of, 649–651
  introduction to, 643–644
  patient monitoring, 645–646
  patient preparation for, 645
  premedication protocol for, 646–647
Anatomy-based cancer pain
  in geriatric dogs and cats, 739
Anemia
  in geriatric dogs and cats
  regenerative vs. nonregenerative, 617–618
Anesthesia/anesthetics
  general
    for geriatric veterinary patients
    sedation vs., 652
  for geriatric veterinary patients, 643–653
    complications of, 649–651
    induction of, 647–648
    insufficient anesthetic depth, 650–651
    introduction to, 643–644
    maintenance of, 647–648
    patient monitoring, 645–646
    patient preparation for, 645
    premedication, 646–647
    prolonged/rough recovery after, 651
    protocols for, 646–649
    repeated episodes, 648–649
    sedation vs. general anesthesia, 652
“Anesthesia-free dentistry”
  in geriatric dogs and cats, 805–806
Anxiety
  cognitive dysfunction syndrome–related
    in geriatric dogs and cats
    adjunctive therapies for, 763
Arrhythmia(s)
  in geriatric dogs and cats, 663
AVDC. See American Veterinary Dental College (AVDC)

B

Bach flowers
  for geriatric dogs and cats, 819–820
Behavioral problems
  in geriatric dogs and cats
    obesity and
      management of, 780–781
    prevalence of, 757
    vs. cognitive dysfunction syndrome, 754–757
Behavioral support
  in cognitive dysfunction syndrome management in geriatric dogs and cats, 758–759

Bilirubin
  in canine chronic hepatitis
    interpretation of, 623
Biochemical profile
  interpretation of
    in canine chronic hepatitis, 622–624
    in canine hyperadrenocorticism, 625
    in chronic renal disease
      in geriatric dogs and cats, 621
      in diabetes mellitus, 626
      in feline hyperthyroidism, 627
Blood pressure
  in geriatric cardiovascular disease, 659
Blood urea nitrogen (BUN)
  interpretation of
    in canine chronic hepatitis, 623–624
    in chronic renal disease
      in geriatric dogs and cats, 621
      in diabetes mellitus, 626
Body composition and metabolism
  aging-related changes affecting, 645

Bradycardia
  anesthesia in geriatric veterinary patients and, 649–650
Brain
  aging of
    in geriatric dogs and cats
      cognitive dysfunction related to, 750–754
      effects of, 751
Breed
  hypothalamic-pituitary-thyroid axis effects of
    in dogs and cats, 710–711

C

Cancer
  defined, 734
Cancer pain
- classification for, 736–737
- in geriatric dogs and cats, 734–744
  - anatomy-based, 739
  - assessment of, 740–741
  - classifications for, 736–738
  - growth factors from tumor cells, 742–743
  - management of
    - mechanism-based, 739–740
    - nutritional, 743–744
    - moving target of, 743
    - neuropathic, 738–739
    - prevalence of, 740
    - severity-based, 739
    - tumor-induced local acidosis related to, 741–742
    - visceral, 743
  - WHO cancer pain ladder, 739

Canine hypothyroidism, 711–717
- clinical signs of, 712
- diagnosis of, 712–715
- epidemiology of, 712
- pathogenesis of, 711–712
  - thyroiditis and
    - diagnosis of, 715–716
    - treatment of, 716–717
Canine thyroid neoplasia, 717–718
Carcinoma/adenocarcinoma
- in geriatric dogs and cats, 698–701
  - esophageal carcinomas, 698–699
  - gastric carcinomas, 699–700
  - intestinal carcinomas, 700–701
Cardiomyopathy
- in geriatric dogs and cats, 661–662
Cardiovascular disease
- in geriatric dogs and cats, 655–668
  - arrhythmias, 663
  - cardiomyopathy, 661–662
  - clinical presentation of, 656–657
  - diagnosis of, 657–660
    - blood pressure measurement in, 659
    - clinical pathology in, 660
    - echocardiography in, 659
    - electrocardiography in, 659
    - Holter monitoring in, 659
    - thoracic radiographs in, 657–659
  - introduction to, 655–656
  - management of, 663
  - pathology related to, 656
  - pericardial disease, 662–663
  - systemic hypertension, 660–661
  - valvular disease, 662
Cardiovascular system
  aging-related changes affecting, 644
  geriatric pharmacology related to, 634–635
Cat(s)
  AD in, 754
  CKD in, 669–692. See also Chronic kidney disease (CKD), in dogs and cats geriatric. See Geriatric dogs and cats
  hyperthyroidism in, 718–722. See also Feline hyperthyroidism
  intestinal mast cell tumor in, 702
  SCL of, 696–698
Central nervous system (CNS)
  aging-related changes affecting, 645
Chiropractic
  for geriatric dogs and cats, 814–816
Cholesterol
  in canine chronic hepatitis
    interpretation of, 624
Chronic hepatitis
  in dogs
    clinical pathology interpretation in, 622–624
Chronic kidney disease (CKD)
  in dogs and cats, 669–692
    clinical, biochemical, and imaging findings in, 670
    clinical pathology interpretation in, 620–622
    described, 669–670
    renal insults related to, 681
    renal secondary hyperparathyroidism related to
      management of, 681–686
    treatment of, 670–687
      dietary changes in, 687
      electrolytes in, 676–678
      hydration in, 679–680
      improvements in, 687
      key points in, 671–673
      neuroendocrine function–related, 681–686
      nutrition in, 673–676
      pH of blood in, 678
      proteinuria related to, 678–679
      retention of substances in, 680–681
      serial monitoring in, 686–687
CKD. See Chronic kidney disease (CKD)
Client education
  cognitive dysfunction syndrome–related
    for geriatric dogs and cats, 758
CNS. See Central nervous system (CNS)
Cognitive ability
  aging effects on
    in geriatric dogs and cats, 751–753
    nutritional care related to, 773–775
Cognitive dysfunction
  AD research related to
Cognitive dysfunction (continued)

lessons learned from, 750–751

geriatric dog and cat research related to

lessons learned from, 751

Cognitive dysfunction syndrome

in geriatric dogs and cats, 749–768

brain aging and, 750–754

client education and screening in veterinary clinic related to, 758

clinical signs of, 754

introduction to, 749–750

management of, 758–763

adjunctive therapies for anxiety and night waking in, 763

behavioral support in, 758–759

dietary, 761–763

drug therapy in, 759–761

environmental enrichment in, 758–759

nutritional, 761–763

medical and behavioral problems vs., 754–757

stress and, 757

Creatinine

interpretation of

in chronic renal disease

in geriatric dogs and cats, 621

in diabetes mellitus, 626

Cushing disease

in dogs

clinical pathology interpretation in, 624–625

D

Dental wear

in geriatric dogs and cats, 793–794

Dentistry

in geriatric dogs and cats, 793–808

“anesthesia-free dentistry,” 805–806

AVDC position paper dental scaling without anesthesia, 806–807

dental wear, 793–794

oral tumors, 797–803. See also Oral tumors, in geriatric dogs and cats

periodontal disease

staging of, 794–795

procedural considerations, 803

tooth resorption, 795–797

treatment considerations, 804

Diabetes mellitus

in geriatric dogs and cats

clinical pathology interpretation in, 625–627

Diet

in geriatric dogs and cats

for CKD, 687

for cognitive dysfunction syndrome, 761–763

evaluation of, 771
Index  841

Diet-sensitive conditions
in geriatric dogs and cats, 773–781

Dog(s)
AD in, 754
chronic hepatitis in
clinical pathology interpretation of, 622–624
CKD in, 669–692. See also Chronic kidney disease (CKD), in dogs and cats geriatric. See Geriatric dogs and cats
hyperadrenocorticism in
clinical pathology interpretation in, 624–625
hypothyroidism in, 711–717. See also Canine hypothyroidism
thyroid neoplasia in, 717–718

Drug(s)
in geriatric dogs and cats
in cognitive dysfunction syndrome management, 759–761
in obesity management, 781
hypothalamic-pituitary-thyroid axis effects of
in dogs and cats, 710

E

Echocardiography
in geriatric cardiovascular disease, 659

Electrocardiography
in geriatric cardiovascular disease, 659

Electrolyte(s)
for CKD in dogs and cats, 676–678

End-of-life considerations
pain management–related
in geriatric dogs and cats, 743–744

Energy needs
in geriatric dogs and cats, 771–772

Environmental enrichment
in cognitive dysfunction syndrome management in geriatric dogs and cats, 758–759

Enzyme(s)
hepatic
interpretation of
in canine hyperadrenocorticism, 625
in diabetes mellitus, 626

Epilepsy
idiopathic
geriatric pharmacology related to, 639–640

Esophageal carcinomas
in geriatric dogs and cats, 698–699

Esophageal tumors
in geriatric dogs and cats, 701

F

Feline hyperthyroidism, 718–722
clinical pathology interpretation in, 627
Feline hyperthyroidism (continued)
  clinical signs of, 719
  described, 718
  diagnosis of, 719–720
  epidemiology of, 719
  hypothyroidism after, 722
  nonfunctional thyroid nodules and, 722
  pathogenesis of, 718–719
  prognosis of, 722
  treatment of, 720–722
Feline intestinal mast cell tumor, 702
Fibroma
  peripheral odontogenic
    in geriatric dogs and cats, 798–801
Fibrosarcoma
  in geriatric dogs and cats, 802
Flower essences
  for geriatric dogs and cats, 819–820
Fructosamine
  in diabetes mellitus
    interpretation of, 626

G
Gamma-glutamyl transferase
  in canine chronic hepatitis
    interpretation of, 623
Gastric carcinomas
  in geriatric dogs and cats, 699–700
Gastric lymphoma
  in geriatric dogs and cats, 698
Gastric tumors
  in geriatric dogs and cats, 701–702
Geriatric dogs and cats. See also specific diseases
  aging of
    described, 824
    alimentary neoplasia in, 693–706. See also Alimentary neoplasia, in geriatric dogs and cats
    alternative medicines for, 809–822. See also Alternative medicines, for geriatric dogs and cats
    anesthesia and analgesia for, 643–653. See also Analgesia/analgesics; Anesthesia/anesthetics
    brains of
      aging effects on, 751
    cardiovascular disease in, 655–668. See also Cardiovascular disease, in geriatric dogs and cats
    CKD in, 669–692. See also Chronic kidney disease (CKD), in dogs and cats
    clinical pathology interpretation in, 615–629
      biochemistry profile, 620
      canine hyperadrenocorticism, 624–625
      chronic renal disease, 620–622
diabetes mellitus, 625–627
feline hyperthyroidism, 627
geriatric screening panel, 616
introduction to, 615–616
trending data during health, 616
cognitive ability of
  aging effects on, 751–753
cognitive dysfunction syndrome in, 749–768. See also Cognitive dysfunction syndrome, in geriatric dogs and cats
declining physiologic reserves of
  aging and, 824–826
dentistry in, 793–808. See also Dentistry, in geriatric dogs and cats
health care programs for, 823–834. See also Health care programs, for geriatric dogs and cats
nutritional care for, 769–791. See also Nutritional care, in geriatric dogs and cats
pain management in, 727–748. See also Pain management, in geriatric dogs and cats
pharmacology related to, 631–642. See also Geriatric pharmacology
thyroid disorders in, 707–725. See also Thyroid disorders, in geriatric dogs and cats

Geriatric pharmacology, 631–642
  cardiovascular system status related to, 634–635
dose adjustments in
  guidelines for, 632–634
hepatic system and, 635–636
idiopathic epilepsy and, 639–640
introduction to, 631–632
neoplasia effects on, 637–638
osteoarthritis and, 638–639
physiology applied to, 632
renal system and, 636–637
seizures and, 639–640
Gingival hyperplasia
  in geriatric dogs and cats, 797–798
Glucose
  interpretation of
    in canine chronic hepatitis, 624
    in canine hyperadrenocorticism, 625
    in diabetes mellitus, 626
Granuloma(s)
  in geriatric dogs and cats, 797

H
Health
  stress effects on
    in geriatric dogs and cats, 757
Health care programs
  for geriatric dogs and cats, 823–834
    aging and, 824–826
    implementation in veterinary practice
      reasons for, 827–831
Health care programs (continued)
  introduction to, 823–824, 826–827
  successful, 831–833
Hemogram
  interpretation of
    in canine chronic hepatitis, 622
    in canine hyperadrenocorticism, 624–625
    in chronic renal disease
      in geriatric dogs and cats, 621
    in diabetes mellitus, 625
    in feline hyperthyroidism, 627
Hepatitis
  chronic
    in dogs
      clinical pathology interpretation of, 622–624
Herbal medicines
  for geriatric dogs and cats, 816–818
Holter monitoring
  in geriatric cardiovascular disease, 659
Homeopathy
  for geriatric dogs and cats, 819
Hydration
  for CKD in dogs and cats, 679–680
Hyperadrenocorticism
  canine
    clinical pathology interpretation in, 624–625
Hyperparathyroidism
  renal secondary
    CKD and
      in dogs and cats
        management of, 681–686
Hyperplasia
  gingival
    in geriatric dogs and cats, 797–798
Hypertension
  systemic
    in geriatric dogs and cats, 660–661
Hyperthyroidism
  feline, 718–722. See also Feline hyperthyroidism
Hypotension
  anesthesia in geriatric veterinary patients and, 649
Hypothalamic-pituitary-thyroid axis
  in dogs and cats
    aging effects on, 708–709
    breed effects on, 710–711
    concurrent illness effects on, 708–709
    drug effects on, 710
Hypothyroidism
  after feline hyperthyroidism, 722
  canine, 711–717. See also Canine hypothyroidism
Hypoxemia
  anesthesia in geriatric veterinary patients and, 650

I

Intestinal carcinomas
  in geriatric dogs and cats, 700–701
Intestinal lymphomas
  in geriatric dogs and cats, 694–696
Intestinal tumors
  in geriatric dogs and cats, 701–702
Iodine
  radioactive
    for feline hyperthyroidism, 721
Iodine restriction
  for feline hyperthyroidism, 721–722

L

Liver
  aging-related changes affecting, 644–645
  geriatric pharmacology related to, 635–636
Liver biopsy
  in canine chronic hepatitis
    interpretation of, 624
Liver enzymes
  interpretation of
    in canine hyperadrenocorticism, 625
    in diabetes mellitus, 626
Lymphoma(s)
  in geriatric dogs and cats, 693–698
    described, 693–694
    gastric, 698
    intestinal, 694–696
    SCL, 696–698

M

Maladaptive pain
  in geriatric dogs and cats
    management of, 727–728
Malignant melanoma
  oral
    in geriatric dogs and cats, 801–802
Medical problems
  cognitive dysfunction syndrome vs.
    in geriatric dogs and cats, 754–757
Melanoma
  malignant
    oral
      in geriatric dogs and cats, 801–802
Mesenchymal tumors
  in geriatric dogs and cats, 701–702
Neoplasia
  alimentary
    in geriatric dogs and cats, 693–706. See also Alimentary neoplasia, in geriatric dogs and cats
  geriatric pharmacology related to, 637–638
  oral
    in geriatric dogs and cats, 797
  thyroid
    canine, 717–718
Neuroendocrine function
  CKD effects on
    in dogs and cats
      treatment of, 681–686
Neuropathic cancer pain
  in geriatric dogs and cats, 738–739
Night waking
  cognitive dysfunction syndrome–related
    in geriatric dogs and cats
      adjunctive therapies for, 763
Nutrients
  in geriatric dogs and cats
    requirements for, 773
Nutritional care
  in geriatric dogs and cats, 769–791
    aging effects on, 771–773
    for cancer pain, 743–744
    for CKD, 673–676
    for cognitive dysfunction of aging, 773–775
    for cognitive dysfunction syndrome, 761–763
    diet-sensitive conditions, 773–781
    dietary evaluation, 771
    energy needs, 771–772
    feeding management evaluation, 771
    nutrients, 773
    nutritional assessment, 770–771
    for obesity, 778–781. See also Obesity, in geriatric dogs and cats
    for osteoarthritis, 775–778
    protein needs, 772–773
Obesity
  in geriatric dogs and cats
    described, 778
    management of
      behavioral factors in, 780–781
      drugs in, 781
      nutritional care in
        dietary factors, 778–780
        feeding management, 780–781
Odontogenic fibroma
  peripheral
    in geriatric dogs and cats, 798–801
Oral neoplasia
  in geriatric dogs and cats, 797
Oral tumors
  in geriatric dogs and cats, 797–803
    clinically aggressive, 801–803
      acanthomatous ameloblastoma, 801
      fibrosarcoma, 802
      malignant melanoma, 801–802
      squamous cell carcinoma, 803
    not clinically aggressive, 797–801
      gingival hyperplasia, 797–798
      granulomas, 797
      oral neoplasia, 797
      peripheral odontogenic fibroma, 798–801
Osteoarthritis
  in geriatric dogs and cats
    nutritional care related to, 775–778
    pain associated with
      origins of, 728–734
    pain management for, 728–734
    pharmacology related to, 638–639

P
Pain
  cancer-related
    in geriatric dogs and cats, 734–744. See also Cancer pain, in geriatric dogs and cats
    chronic
      classification for, 736–737
    maladaptive
      in geriatric dogs and cats
        management of, 727–728
      management of. See Pain management
Pain management
  in geriatric dogs and cats, 727–748
    for cancer pain, 734–744. See also Cancer pain, in geriatric dogs and cats
    end-of-life considerations, 743–744
    for maladaptive pain, 727–728
    for osteoarthritis, 728–734
Pericardial disease
  in geriatric dogs and cats, 662–663
Periodontal disease
  in geriatric dogs and cats
    staging of, 794–795
Peripheral odontogenic fibroma
  in geriatric dogs and cats, 798–801
pH
  for CKD in dogs and cats, 678
Pharmacology
  geriatric, 631–642. See also Geriatric pharmacology

Phosphorus
  interpretation of
    in chronic renal disease
      in geriatric dogs and cats, 621
      in diabetes mellitus, 626

Platelet(s)
  in geriatric dogs and cats
    evaluation of, 619–620

Poikilocyte(s)
  in geriatric dogs and cats, 618

Potassium
  interpretation of
    in chronic renal disease
      in geriatric dogs and cats, 621
      in diabetes mellitus, 626

Protein needs
  in geriatric dogs and cats, 772–773

Proteinuria
  CKD and
    in dogs and cats
      management of, 678–679

Pulmonary system
  aging-related changes affecting, 644

R

Radioactive iodine
  for feline hyperthyroidism, 721

Radiography
  in geriatric cardiovascular disease, 657–659

Red blood cells
  in geriatric hemogram
    evaluation of, 617–618

Renal disease
  chronic. See Chronic kidney disease (CKD)

Renal secondary hyperparathyroidism
  CKD and
    in dogs and cats
      management of, 681–686

Renal system
  aging-related changes affecting, 644
  geriatric pharmacology related to, 636–637

S

SCL. See Small cell, lymphocytic lymphoma (SCL)

Sedation
  general anesthesia vs.
    for geriatric veterinary patients, 652
Seizures
geriatric pharmacology related to, 639–640
Selegiline
in cognitive dysfunction syndrome management in geriatric dogs and cats, 760–761
Serum alkaline phosphatase
in canine chronic hepatitis
interpretation of, 622–623
Serum bilirubin
in canine chronic hepatitis
interpretation of, 623
Severity-based cancer pain
in geriatric dogs and cats, 739
Small cell, lymphocytic lymphoma (SCL) of cats, 696–698
Squamous cell carcinoma
oral
in geriatric dogs and cats, 803
Stress
health and well-being effects of
in geriatric dogs and cats, 757
Synovial fluid
inflammatory mediators diffusing into cartilage via osteoarthritic pain in geriatric dogs and cats related to, 730–734
Systemic hypertension
in geriatric dogs and cats, 660–661

 T
Thiourylenes
for feline hyperthyroidism, 720–721
Thyroid disorders
in geriatric dogs and cats, 707–725. See also specific disorders
canine hypothyroidism, 711–717
canine thyroid neoplasia, 717–718
feline hyperthyroidism, 718–722
introduction to, 707
Thyroid gland
in geriatric dogs and cats
physiology of, 707–708
Thyroid neoplasia
canine, 717–718
Thyroid nodules
nonfunctional
feline hyperthyroidism and, 722
Thyroidectomy
for feline hyperthyroidism, 721
Thyroiditis
in dogs
diagnosis of, 715–716
Tooth resorption
  in geriatric dogs and cats, 795–797
  AVDC stages of, 795–797
  treatment of, 797
Total protein and albumin
  in canine chronic hepatitis
  interpretation of, 623
Total T4
  interpretation of
    in canine hyperadrenocorticism, 625
    in chronic renal disease
      in geriatric dogs and cats, 621
    in feline hyperthyroidism, 627
Triglycerides
  in canine chronic hepatitis
  interpretation of, 624
Tumor(s). See also specific types
  local acidosis related to
    in geriatric dogs and cats, 741–742
  mesenchymal
    in geriatric dogs and cats, 701–702
  oral
    in geriatric dogs and cats, 797–803
Tumor cells
  growth factors from
    in geriatric dogs and cats, 742–743

U
Urinalysis
  interpretation of
    in canine chronic hepatitis, 624
    in canine hyperadrenocorticism, 625
    in chronic renal disease
      in geriatric dogs and cats, 621–622
    in diabetes mellitus, 627
    in feline hyperthyroidism, 627
Urine bilirubin
  in canine chronic hepatitis
  interpretation of, 623

V
Valvular disease
  in geriatric dogs and cats, 662
Visceral cancer pain
  in geriatric dogs and cats, 743

W
Waking
  nighttime
cognitive dysfunction syndrome–related
  in geriatric dogs and cats
    adjunctive therapies for, 763

Well-being
  stress effects on
    in geriatric dogs and cats, 757

White blood cells
  in geriatric dogs and cats
    evaluation of, 618–619

WHO. See World Health Organization (WHO)

World Health Organization (WHO) cancer pain ladder, 739