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## Section 1: Common Clinical Signs and Laboratory Abnormalities

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| 1  | Anemia                                | John M. Thomason, DVM, MS, DACVIM (SAIM)                                                                                         | / 3  |
| 2  | Anorexia                              | Elaine Wexler-Mitchell, DVM, DABVP (Feline)                                                                                      | / 6  |
| 3  | Arrhythmias                           | Sangeeta Vengsarkar Shah, BVSc and AH, MVSc (Med), Larry P. Tilley, DVM, DACVIM, and Lisa Restine Drylewicz, DVM, DABVP (Feline) | / 8  |
| 4  | Ascites                               | Sangeeta Vengsarkar Shah, BVSc and AH, MVSc (Med), Larry P. Tilley, DVM, DACVIM, and Lisa Restine Drylewicz, DVM, DABVP (Feline) | / 13 |
| 5  | Blindness                             | Karen Brantman Crosetto, DVM, MS, DACVO                                                                                          | / 15 |
| 6  | Cervical Ventroflexion                | Nicole Belward, DVM, DACVIM (SAIM)                                                                                               | / 18 |
| 7  | Coughing                              | Lisa Restine Drylewicz, DVM, DABVP (Feline)                                                                                      | / 21 |
| 8  | Cutaneous Markers of Systemic Disease | Jason B. Pieper, DVM, MS, DACVD                                                                                                  | / 23 |
| 9  | Diarrhea                              | John Thomason, DVM, MS, DACVIM (SAIM)                                                                                            | / 26 |
| 10 | Digital Lesions                       | Cynthia L. McManis, DVM, DABVP (Feline Practice)                                                                                 | / 29 |
| 11 | Draining Tracts and Nodules           | Lisa Durso Keel, DVM, DABVP (Canine and Feline) and Ashley E. Detwiler, DVM, Diplomate ACVD (Dermatology)                        | / 33 |
| 12 | Fever                                 | Nicole Belward, DVM, DACVIM (SAIM)                                                                                               | / 39 |
| 13 | Hypercalcemia                         | Samantha Taylor, BVetMed(Hons), CertSAM, DipECVIM-CA, MANZCVS, FRCVS                                                             | / 42 |
| 14 | Hyperkalemia                          | Samantha Taylor, BVetMed(Hons), CertSAM, DipECVIM-CA, MANZCVS, FRCVS                                                             | / 46 |
| 15 | Hypernatremia                         | Philip Krawec, DVM, DACVECC                                                                                                      | / 49 |
| 16 | Hypoalbuminemia                       | Tamara McArdle, DVM, DABVP (Canine and Feline Practice)                                                                          | / 51 |
| 17 | Hypocalcemia                          | Samantha Taylor, BVetMed(Hons), CertSAM, DipECVIM-CA, MANZCVS, FRCVS                                                             | / 54 |
| 18 | Hypokalemia                           | Audrey K. Cook, BVM&S, MSc Vet Ed, FRCVS, Dip ACVIM, Dip CVIM, Dip ABVP (Feline Practice)                                        | / 57 |
| 19 | Hypomagnesemia                        | Samantha Taylor, BVetMed(Hons), CertSAM, DipECVIM-CA, MANZCVS, FRCVS                                                             | / 59 |
| 20 | Hypophosphatemia                      | Stephanie Gandy Murphy, DVM and Lisa Restine Drylewicz, DVM, DABVP (Feline)                                                      | / 61 |
| 21 | Icterus                               | Cynthia L. McManis, DVM, DABVP (Feline Practice)                                                                                 | / 63 |
| 22 | Ileus                                 | Lisa Restine Drylewicz, DVM, DABVP (Feline)                                                                                      | / 67 |
| 23 | Miliary Dermatitis                    | Jason B. Pieper, DVM, MS, DACVD                                                                                                  | / 71 |
| 24 | Murmurs                               | Sangeeta Vengsarkar Shah, BVSc and AH, MVSc (Med), Larry P. Tilley, DVM, DACVIM, and Lisa Restine Drylewicz, DVM, DABVP (Feline) | / 72 |
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| 27 | Polyuria and Polydipsia               | John M. Thomason, DVM, MS, DACVIM (SAIM)                                                                                         | / 80 |
| 28 | Trichobezoars                         | Elaine Wexler-Mitchell, DVM, DABVP (Feline)                                                                                      | / 82 |
| 29 | Vomiting                              | Lisa Durso Keel, DVM, DABVP (Canine and Feline)                                                                                  | / 85 |
| 30 | Weight Loss                           | Lisa Restine Drylewicz, DVM, DABVP (Feline) and Aarti Kathrani, BVetMed (Hons), PhD, DACVIM (SAIM & Nutrition), FHEA, MRCVS      | / 89 |

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| 33 | Adenocarcinoma and Carcinoma | John M. Thomason, DVM, MS, DACVIM (SAIM)                                                     | / 102 |
| 34 | Amyloidosis                  | Lisa Durso Keel, DVM, DABVP (Canine and Feline)                                              | / 104 |
| 35 | Anal Sac Disease             | Lisa Restine Drylewicz, DVM, DABVP (Feline)                                                  | / 107 |
| 36 | Aortic Stenosis              | Sangeeta Vengsarkar Shah, BVSc and AH, MVSc (Med) and Larry P. Tilley, DVM, DACVIM           | / 109 |
| 37 | Basal Cell Tumors            | Rachel V. Brady, DVM, PhD., DACVIM (Oncology) and Bradley R. Schmidt, DVM, DACVIM (Oncology) | / 111 |
| 38 | Bite Wounds                  | Lisa Restine Drylewicz, DVM, DABVP (Feline)                                                  | / 113 |
| 39 | Brachycephalic Syndrome      | Ryan Butler, DVM, MS, DACVS-SA and Lisa Durso Keel, DVM, DABVP (Canine and Feline)           | / 116 |
| 40 | Bronchial Disease, Chronic   | Elaine Wexler-Mitchell, DVM, DABVP (Feline Practice)                                         | / 121 |
| 41 | Carcinomatosis               | Rachel V. Brady, DVM, PhD, DACVIM (Oncology) and Bradley R. Schmidt, DVM, DACVIM (Oncology)  | / 126 |

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| 43 | Cardiomyopathy, Hypertrophic                                 | <i>Sangeeta Vengsarkar Shah, BVSc and AH, MVSc (Med), Larry P. Tilley, DVM, DACVIM, and Lisa Durso Keel, DVM, DABVP (Canine and Feline)</i> / 135                                      |
| 44 | Cardiomyopathy, Restrictive                                  | <i>Sangeeta Vengsarkar Shah, BVSc and AH, MVSc (Med), Larry P. Tilley, DVM, DACVIM, and Lisa Restine Drylewicz, DVM, DABVP (Feline)</i> / 145                                          |
| 45 | Cataracts                                                    | <i>Katelyn E. Fentiman, MS, DVM, DACVO and Emily S. McCool, DVM, MS, DACVO</i> / 148                                                                                                   |
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| 62 | Diabetic Ketoacidosis                                        | <i>Andrew Bugbee, DVM, DACVIM (SAIM) and Audrey K. Cook, BVM&amp;S, MSc Vet Ed, FRCVS, Dip ACVIM, Dip ECVIM, Dip ABVP (Feline Practice)</i> / 199                                      |
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| 77 | Flea Allergy Dermatitis                                      | <i>Jason B. Pieper, DVM, MS, DACVD</i> / 253                                                                                                                                           |
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| 80 | Glomerulonephritis                                           | <i>Bianca N. Lourenço, DVM, MSc, PhD, DACVIM (SAIM) and Joseph W. Bartges, DVM, PhD, DACVIM (SAIM, N)</i> / 260                                                                        |
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| 82 | Hemangiosarcoma                                              | <i>Valerie MacDonald-Dickinson, DVM, DACVIM (Oncology)</i> / 265                                                                                                                       |
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| 84 | Hepatic Lipidosis                                            | <i>Harry Cridge, MVB, MS, PG Cert Vet Ed, DACVIM (SAIM), DECVIM-CA, FHEA, MRCVS</i> / 278                                                                                              |
| 85 | Hepatobiliary Diseases                                       | <i>Lisa Durso Keel, DVM, DABVP (Canine and Feline), John Thomason, DVM, MS, DACVIM (SAIM), and Taya M. Marquardt, DVM, MS, DACVIM (Oncology)</i> / 281                                 |
| 86 | Hip Dysplasia                                                | <i>Petra Černá, PhD, DACVIM (SAIM), Dipl. ECVIM-CA, MANZCVS (Medicine of Cats), CertAVP (SAM - F), MRCVS, AFHEA, AdvCertFB and Jason Bleedorn, DVM, MS, DACVS (Small Animal)</i> / 286 |
| 87 | Horner's Syndrome                                            | <i>William Kay, Jr., VMD, DACVIM (Neurology)</i> / 291                                                                                                                                 |
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| 89 | Hyperaldosteronism (Conn's Disease)                          | <i>Audrey K. Cook, BVM&amp;S, MSc Vet Ed, FRCVS, Dip ACVIM, Dip ECVIM, Dip ABVP (Feline Practice)</i> / 300                                                                            |
| 90 | Hypercortisolism                                             | <i>Audrey K. Cook, BVM&amp;S, MSc Vet Ed, FRCVS, Dip ACVIM, Dip ECVIM, Dip ABVP (Feline Practice)</i> / 303                                                                            |

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| 92  | Hyperesthesia Syndrome                                  | William Kay, Jr., VMD, DACVIM (Neurology) / 308                                                                                                                      |
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| 95  | Hypertension, Systemic                                  | Lisa Durso Keel, DVM, DABVP (Canine and Feline) and John M. Thomason, DVM, MS, DACVIM (SAIM) / 318                                                                   |
| 96  | Hyperthyroidism                                         | David Bruyette, DVM, DACVIM, FNAP / 323                                                                                                                              |
| 97  | Hypoadrenocorticism (Addison's Disease)                 | Andrew Bugbee, DVM, DACVIM (SAIM) / 328                                                                                                                              |
| 98  | Idiopathic Ulcerative Dermatitis                        | Jason B. Pieper, DVM, MS, DACVD / 330                                                                                                                                |
| 99  | Immune-mediated Anemias                                 | Lisa Restine Drylewicz, DVM, DABVP (Feline) and Claire L. Fellman, DVM, PhD, DACVIM (SAIM), DACVCP / 333                                                             |
| 100 | Immune-Mediated Polyarthritis                           | Lisa Durso Keel, DVM, DABVP (Canine and Feline) and Samantha Muro, DVM, MS, DACVIM (SAIM) / 336                                                                      |
| 101 | Intracranial Tumors                                     | William Kay, Jr., VMD, DACVIM (Neurology) / 341                                                                                                                      |
| 102 | Intraocular Tumors                                      | Karen Brantman Crosetto, DVM, MS, DACVO / 344                                                                                                                        |
| 103 | Laryngeal Disease                                       | Samantha Taylor, BVetMed(Hons), CertSAM, DipECVIM-CA, MANZCVS, FRCVS / 349                                                                                           |
| 104 | Lumbosacral Disease                                     | Lisa Restine Drylewicz, DVM, DABVP (Feline) / 353                                                                                                                    |
| 105 | Lymphoma                                                | Erica Faulhaber Menicucci, DVM, MS DACVIM (Oncology) and Bradley R. Schmidt, DVM, DACVIM (Oncology) / 356                                                            |
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| 110 | Constipation/Obstipation/Megacolon                      | Lisa Durso Keel, DVM, DABVP (Canine and Feline) and Harry Cridge, MVB, MS, PG Cert Vet Ed, DACVIM (SAIM), DECVIM-CA, FHEA, MRCVS / 375                               |
| 111 | Meningoencephalomyelitis of Unknown Origin              | Ryan Gibson, DVM, M.Ed., DACVIM (Neurology) / 380                                                                                                                    |
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| 119 | Neurologic Trauma                                       | Ryan Gibson, DVM, M.Ed., DACVIM (Neurology) / 400                                                                                                                    |
| 120 | Nonsteroidal Anti-Inflammatory Drug Toxicosis           | Katie Davis Mauro, DVM, DACVECC / 402                                                                                                                                |
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| 125 | Osteoarthritis and Degenerative Joint Disease           | Mark E. Epstein, DVM, DABVP (Canine and Feline), FF CAPM, CVPP / 418                                                                                                 |
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| 129 | Pancreatitis, Acute                                     | Jörg M. Steiner, Med Vet, Dr Med Vet, PhD, DACVIM-SAIM, DECVIM-CA, AGAF / 435                                                                                        |
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| 138 | Pododermatitis, Plasmacytic                             | Melanie J. Dobromylskyj, BSc (Hons), BVSc, PhD, PGCert (VetEd), FHEA, FRCPath, FRCVS and Richard Malik, DVSc, DipVetAn, MVetClinStud, PhD, FACVSc, FASM, MASID / 462 |
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| 156 | Stud Tail                                                                  | Jason B. Pieper, DVM, MS, DACVD / 531                                                                                                      |
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| 158 | Tetralogy of Fallot                                                        | Sangeeta Vengsarkar Shah, BVSc and AH, MVSc (Med), Larry P. Tilley, DVM, DACVIM, and Lisa Restine Drylewicz, DVM, DABVP (Feline) / 535     |
| 159 | Thiamine Deficiency                                                        | Diana McGovern, BVMS, DACVIM (SAIM) / 538                                                                                                  |
| 160 | Third Eyelid Diseases                                                      | Gwen H. Sila, DVM, DACVO / 540                                                                                                             |
| 161 | Thymoma                                                                    | Erica Faulhaber Menicucci, DVM, MS, DACVIM (Oncology) and Bradley R. Schmidt, DVM, DACVIM (Oncology) / 543                                 |
| 162 | Tooth Resorption                                                           | Jan Bellows, DVM, DAVDC, DABVP (Canine and Feline), FAVD / 546                                                                             |
| 163 | Tracheal Disease                                                           | Samantha Taylor, BVetMed (Hons), CertSAM, DipECVIM-CA, MANZCVS, FRCVS / 550                                                                |
| 164 | Triaditis                                                                  | Lisa Durso Keel, DVM, DABVP (Canine and Feline) and Harry Cridge, MVB, MS, PG Cert Vet Ed, DACVIM (SAIM), DECVIM-CA, FHEA, MRCVS / 553     |
| 165 | Ureteral Obstruction                                                       | Rhett Marshall, BVSc, PhD, MACVSc (Small Animal Surgery) and Marcus Gunew, BVSc, BSc (Vet), FACVSc (Feline Medicine) / 556                 |
| 166 | Urethral Obstruction                                                       | Ilissa Chasnick, DVM, Katie D. Mauro, DVM, DACVECC, and Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 561                              |
| 167 | Urinary Bladder Tumors                                                     | Valerie MacDonald-Dickinson, DVM, DACVIM (Oncology) / 569                                                                                  |
| 168 | Urolithiasis                                                               | Katrina Breitreiter, DVM, DABVP (Feline) / 572                                                                                             |
| 169 | Uveitis                                                                    | Gwen H. Sila, DVM, DACVO / 577                                                                                                             |
| 170 | Ventricular Septal Defect                                                  | Sangeeta Vengsarkar Shah, BVSc and AH, MVSc (Med), Larry P. Tilley, DVM, DACVIM, and Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 581 |
| 171 | Vestibular Syndrome                                                        | William Kay, Jr., VMD, DACVIM (Neurology) / 584                                                                                            |

### Section 3: Infectious Diseases

|     |                                                                |                                                                                                                                                                                                                                          |
|-----|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 172 | Actinomycosis                                                  | Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 589                                                                                                                                                                                    |
| 173 | Anaplasmosis                                                   | Tamara McArdle, DVM, DABVP (Canine and Feline Practice) / 591                                                                                                                                                                            |
| 174 | Aspergillosis                                                  | Diana McGovern, BVMS, DACVIM (SAIM) / 593                                                                                                                                                                                                |
| 175 | Bartonellosis                                                  | John M. Thomason, DVM, MS, DACVIM (SAIM) / 596                                                                                                                                                                                           |
| 176 | Blastomycosis                                                  | Andrew S. Hanzlicek, DVM, MS, DACVIM (SAIM) / 598                                                                                                                                                                                        |
| 177 | Bordetellosis                                                  | Stephanie Gandy Murphy, DVM and Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 602                                                                                                                                                    |
| 178 | Calicivirus                                                    | Stephanie Gandy Murphy, DVM and Lisa Restine Drylewicz, DVM, DABVP (Feline) / 604                                                                                                                                                        |
| 179 | Chlamydiae                                                     | Stephanie Gandy Murphy, DVM and Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 607                                                                                                                                                    |
| 180 | Coccidioidomycosis                                             | Lisa F. Shubitz, DVM / 609                                                                                                                                                                                                               |
| 181 | Cryptococcus                                                   | Cynthia L. McManis, DVM, DABVP (Feline Practice) / 612                                                                                                                                                                                   |
| 182 | Cuterebriasis                                                  | Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 615                                                                                                                                                                                    |
| 183 | Cytauxzoonosis                                                 | Ashley Allen-Durrance, DVM, DACVECC / 617                                                                                                                                                                                                |
| 184 | Dermatophytosis                                                | Lisa Durso Keel, DVM, DABVP (Canine and Feline) and Ashley E. Detwiler, DVM, Diplomate ACVD (Dermatology) / 620                                                                                                                          |
| 185 | Ectoparasites                                                  | Jason B. Pieper, DVM, MS, DACVD / 626                                                                                                                                                                                                    |
| 186 | Feline Enteric Coronavirus                                     | Lisa Restine Drylewicz, DVM, DABVP (Feline) / 633                                                                                                                                                                                        |
| 187 | Feline Immunodeficiency Virus Infection                        | Glenn Allen Olah, DVM, PhD, DABVP (Feline) / 634                                                                                                                                                                                         |
| 188 | Feline Infectious Peritonitis                                  | Sally Coggins, BVSc (Hons I), PhD, MANZCVS (Medicine of Cats), Richard Malik, DVSc, DipVetAn, MVetClinStud, PhD, FACVSc, FASM, MASID, and Jacqueline Norris, BVSc (Hons), MVS, PhD, FASM, Grad Cert (Higher Ed), MRCVS (Vet Micro) / 637 |
| 189 | Feline Leukemia Virus                                          | Fernanda Vieira Amorim da Costa, DVM, MSc, PhD / 648                                                                                                                                                                                     |
| 190 | Flukes                                                         | Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 653                                                                                                                                                                                    |
| 191 | Giardiasis                                                     | Stephanie Gandy Murphy, DVM and Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 656                                                                                                                                                    |
| 192 | Heartworm Disease and Heartworm-Associated Respiratory Disease | Jane E. Brunt, DVM and Anna R. Martin, VMD / 658                                                                                                                                                                                         |
| 193 | Helicobacter Infection                                         | Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 662                                                                                                                                                                                    |
| 194 | Hemotropic Mycoplasmosis                                       | John M. Thomason, DVM, MS, DACVIM (SAIM) / 664                                                                                                                                                                                           |
| 195 | Herpesvirus                                                    | Tamara McArdle, DVM, DABVP (Canine and Feline Practice), Katelyn E. Fentiman, MS, DVM, DACVO, and Emily S. McCool, DVM, MS, DACVO / 667                                                                                                  |
| 196 | Histoplasmosis                                                 | Andrew S. Hanzlicek, DVM, MS, DACVIM (SAIM) / 673                                                                                                                                                                                        |
| 197 | Intestinal Parasites                                           | Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 678                                                                                                                                                                                    |
| 198 | Leprosy Syndrome                                               | Lisa Durso Keel, DVM, DABVP (Canine and Feline) and Ashley E. Detwiler, DVM, Diplomate ACVD (Dermatology) / 685                                                                                                                          |
| 199 | Lung Parasites                                                 | Lisa Restine Drylewicz, DVM, DABVP (Feline) / 687                                                                                                                                                                                        |

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|-----|------------------------------|---------------------------------------------------------------|
| 200 | <i>Malassezia</i> Dermatitis | Jason B. Pieper, DVM, MS, DACVD / 690                         |
| 201 | Mycobacterial Diseases       | Cynthia L. McManis, DVM, DABVP (Feline Practice) / 692        |
| 202 | Myiasis                      | Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 695         |
| 203 | Neospora                     | Ryan Gibson, DVM, M.Ed., DACVIM (Neurology) / 697             |
| 204 | Nocardiosis                  | Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 698         |
| 205 | Panleukopenia Virus          | Philip Krawec, DVM, DACVECC / 700                             |
| 206 | Plague                       | Tamara McArdle, DVM, DABVP (Canine and Feline Practice) / 703 |
| 207 | Rabies                       | Lisa Restine Drylewicz, DVM, DABVP (Feline) / 706             |
| 208 | Salmonellosis                | John M. Thomason, DVM, MS, DACVIM (SAIM) / 708                |
| 209 | Sporotrichosis               | Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 710         |
| 210 | Stomach Worms                | John M. Thomason, DVM, MS, DACVIM (SAIM) / 712                |
| 211 | Toxoplasmosis                | Lisa Restine Drylewicz, DVM, DABVP (Feline) / 714             |
| 212 | Tritrichomoniasis            | Cynthia L. McManis, DVM, DABVP (Feline Practice) / 717        |
| 213 | Viral Dermatitis             | Jason B. Pieper, DVM, MS, DACVD / 720                         |
| 214 | Zoonotic Diseases            | Lisa Restine Drylewicz, DVM, DABVP (Feline) / 723             |

## Section 4: Clinical Procedures

|     |                                                    |                                                                                                                                                          |
|-----|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 215 | Acid-Base Status and Blood Gas Analysis            | Jackson A. Griffith, DVM and Katie D. Mauro, DVM, DACVECC / 731                                                                                          |
| 216 | Anesthetic Protocols                               | Alanna (Lane) Johnson, DVM, DACVAA / 734                                                                                                                 |
| 217 | Blood Transfusion                                  | John M. Thomason, DVM, MS, DACVIM (SAIM) / 737                                                                                                           |
| 218 | Bone Marrow Aspiration                             | John M. Thomason, DVM, MS, DACVIM (SAIM) / 740                                                                                                           |
| 219 | Cardiopulmonary Resuscitation                      | Jake Wolf, DVM, DACVECC / 743                                                                                                                            |
| 220 | Central Venous Catheter Placement                  | Meredith 't Hoen, DVM, DACVECC, DECVECC / 747                                                                                                            |
| 221 | Cerebrospinal Fluid Collection (Atlanto-Occipital) | William Kay, Jr., VMD, DACVIM (Neurology) / 751                                                                                                          |
| 222 | Electrocardiogram                                  | Sangeeta Vengsarkar Shah, BVSc and AH, MVSc (Med), Larry P. Tilley, DVM, DACVIM, and Lisa Restine Drylewicz, DVM, DABVP (Feline) / 754                   |
| 223 | Endocrine Panels: Uses and Interpretation          | Sarah I. Jacob, DVM, PhD, DACVIM (LAIM) and Rebecca A. Hoogstraten, DVM, MS / 755                                                                        |
| 224 | Endoscopic Applications                            | Audrey K. Cook, BVMS&S, MSc Vet Ed, FRCVS, Dip ACVIM, Dip ECVIM, Dip ABVP (Feline Practice) / 758                                                        |
| 225 | Enteral Nutrition                                  | Lisa M. Restine, DVM, DABVP (Feline) and Iveta Bečvářová, DVM, MS, DACVIM (Nutrition) / 766                                                              |
| 226 | Extracorporeal Blood Purification                  | Katie D. Mauro, DVM, DACVECC / 769                                                                                                                       |
| 227 | Fine-Needle Biopsy                                 | John M. Thomason, DVM, MS, DACVIM (SAIM) / 771                                                                                                           |
| 228 | Fluid Therapy                                      | Ilissa Chasnick, DVM and Katie D. Mauro, DVM, DACVECC / 773                                                                                              |
| 229 | Gastrointestinal Panel: Uses and Interpretations   | Emily N. Gould, DVM, MS, PhD, DACVIM (SAIM) / 778                                                                                                        |
| 230 | Lymphoma, Chemotherapy                             | Erica Faulhaber Menicucci, DVM, MS, DACVIM (Oncology), Rachel V. Brady, DVM, PhD, DACVIM (Oncology) and Bradley R. Schmidt, DVM, DACVIM (Oncology) / 781 |
| 231 | Imaging: Echocardiography                          | Sonya G. Gordon, BSc, DVM, DVSc, DACVIM (Cardiology) and June Boon, BA, MS / 785                                                                         |
| 232 | Imaging: Point-of-Care Ultrasound                  | Serge Chalhoub, BSc, DVM, DACVIM (SAIM) and Søren Boysen, DVM, DACVECC / 791                                                                             |
| 233 | Imaging: Radiography                               | Alison M. Lee, DVM, MS, DACVR and Marc A. Seitz, DVM, DACVR, DABVP (Canine and Feline Practice) / 803                                                    |
| 234 | Imaging: Ultrasonography                           | Marc Seitz, DVM, DACVR, DABVP (Canine and Feline Practice) and Alison M. Lee, DVM, MS, DACVR / 810                                                       |
| 235 | Ophthalmic Examination                             | Karen Brantman Crosetto, DVM, MS, DACVO / 816                                                                                                            |
| 236 | Neurologic Examination                             | Stephanie Gandy Murphy, DVM and Lisa Restine Drylewicz, DVM, DABVP (Feline) / 820                                                                        |
| 237 | Pain Management                                    | Alanna (Lane) Johnson, DVM, DACVAA / 824                                                                                                                 |
| 238 | Radiation Therapy                                  | Jennifer E. Merkle, DVM, DACVR (RO) / 828                                                                                                                |
| 239 | Radioiodine Therapy for Hyperthyroidism            | David Bruyette, DVM, DACVIM, FNAP / 831                                                                                                                  |
| 240 | Restraint and Handling Techniques                  | Lisa Restine Drylewicz, DVM, DABVP (Feline) / 833                                                                                                        |
| 241 | Triage and Stabilization                           | Jake Wolf, DVM, DACVECC / 835                                                                                                                            |
| 242 | Vaccine Protocols                                  | Tamara McArdle, DVM, DABVP (Canine and Feline Practice) / 837                                                                                            |

## Section 5: Surgery

|     |                                                    |                                                                |
|-----|----------------------------------------------------|----------------------------------------------------------------|
| 243 | Bulla Osteotomy, Ventral Approach                  | Melody Whitney, VMD, MS, Dipl ACVS-SA / 843                    |
| 244 | Colectomy                                          | Maureen Spinner, DVM, DACVS-SA / 847                           |
| 245 | Corneal Surgery                                    | Gwen H. Sila, DVM, DACVO / 852                                 |
| 246 | Cranial Cruciate Ligament Rupture                  | Ryan Butler, DVM, MS, DACVS-SA / 855                           |
| 247 | Cryptorchidism Surgery                             | Ryan Butler, DVM, MS, DACVS-SA / 858                           |
| 248 | Dental Extraction Techniques                       | Jan Bellows, DVM, DAVDC, DABVP (Canine and Feline), FAVD / 861 |
| 249 | Esophagostomy Tube Placement                       | Lisa Durso Keel, DVM, DABVP (Canine and Feline) / 867          |
| 250 | Eyelid Diseases and Surgery                        | Gwen H. Sila, DVM, DACVO / 870                                 |
| 251 | Femur Head and Neck Osteotomy/Excision (FHNO/FHNE) | Bharadhwaj Ranganathan, BVSc & AH, MS, DACVS-SA / 875          |
| 252 | Frontal Sinus Trephination and Ablation            | Bharadhwaj Ranganathan, BVSc & AH, MS, DACVS-SA / 878          |
| 253 | Gastrostomy Tube Placement                         | Melody Whitney, VMD, MS, Dipl ACVS-SA / 880                    |
| 254 | Jejunostomy Tube Placement                         | Bharadhwaj Ranganathan, BVSc & AH, MS, DACVS-SA / 883          |
| 255 | Laparotomy for Chronic Enteropathies               | Lisa Restine Drylewicz, DVM, DABVP (Feline) / 886              |
| 256 | Laser Surgery, CO <sub>2</sub>                     | John C. Godbold, Jr., DVM / 888                                |

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|-----|------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------|
| 257 | Linear Foreign Body                                  | Cynthia L. McManis, DVM, DABVP (Feline Practice) and Lisa Restine Drylewicz, DVM, DABVP (Feline) | / 892 |
| 258 | Luxating Patella                                     | Bharadhwaj Ranganathan, BVSc & AH, MS, DACVS-SA                                                  | / 896 |
| 259 | Mandibular Labial Avulsion Repair                    | Maureen Spinner, DVM, DACVS-SA                                                                   | / 900 |
| 260 | Mandibular Symphyseal Separation                     | Melody Whitney, VMD, MS, Dipl ACVS-SA                                                            | / 902 |
| 261 | Mastectomy                                           | Hayley M. Gallaher, DVM, MS, DACVS-SA, PG Cert Vet Ed                                            | / 904 |
| 262 | Maxillomandibular Fixation                           | Hayley M. Gallaher, DVM, MS, DACVS-SA, PG Cert Vet Ed                                            | / 908 |
| 263 | Nasoesophageal and Nasogastric Tube Placement        | Lisa Restine Drylewicz, DVM, DABVP (Feline)                                                      | / 910 |
| 264 | Nasopharyngeal Mass Removal                          | Hayley M. Gallaher, DVM, MS, DACVS-SA, PG Cert Vet Ed                                            | / 912 |
| 265 | Onychectomy                                          | Lisa Restine Drylewicz, DVM, DABVP (Feline)                                                      | / 916 |
| 266 | Oronasal Fistula Repair                              | Heloisia Justen Moreira de Souza, DVM, MS, PhD, and Katia Barão Corgozinho, DVM, MS, PhD         | / 920 |
| 267 | Perivulvar Skin Fold Removal (Episioplasty)          | Maureen Spinner, DVM, DACVS-SA                                                                   | / 927 |
| 268 | Rhinotomy                                            | Bharadhwaj Ranganathan, BVSc & AH, MS, DACVS-SA                                                  | / 930 |
| 269 | Skin Flaps, Local                                    | Ryan Butler, DVM, MS, DACVS-SA                                                                   | / 933 |
| 270 | Subcutaneous Ureteral Bypass (SUB)                   | Hayley M. Gallaher, DVM, MS, DACVS-SA, PG Cert Vet Ed                                            | / 937 |
| 271 | Surgical Complications                               | Lisa Durso Keel, DVM, DABVP (Canine and Feline)                                                  | / 940 |
| 272 | Thoracostomy Tube Placement                          | Maureen Spinner, DVM, DACVS-SA                                                                   | / 943 |
| 273 | Thyroidectomy                                        | Hayley M. Gallaher, DVM, MS, DACVS-SA, PG Cert Vet Ed                                            | / 946 |
| 274 | Total Ear Canal Ablation and Lateral Bulla Osteotomy | Bharadhwaj Ranganathan, BVSc & AH, MS, DACVS-SA                                                  | / 950 |
| 275 | Urethrostomy, Perineal                               | Melody Whitney, VMD, MS, Dipl ACVS-SA                                                            | / 954 |
| 276 | Ureterotomy                                          | Bharadhwaj Ranganathan, BVSc & AH, MS, DACVS-SA                                                  | / 958 |

## Section 6: Behavior

|     |                                      |                                     |       |
|-----|--------------------------------------|-------------------------------------|-------|
| 277 | Aggression, Human                    | Amy L. Pike, DVM, DACVB, IAABC-CDBC | / 963 |
| 278 | Aggression, Intercat                 | Amy L. Pike, DVM, DACVB, IAABC-CDBC | / 967 |
| 279 | Behavioral Pharmaceuticals           | Amy L. Pike, DVM, DACVB, IAABC-CDBC | / 971 |
| 280 | Environmental Enrichment in the Home | Amy L. Pike, DVM, DACVB, IAABC-CDBC | / 975 |
| 281 | The Feline Hospital Experience       | Christine D. Calder, DVM, DACVB     | / 980 |
| 282 | House Soiling                        | Amy L. Pike, DVM, DACVB, IAABC-CDBC | / 987 |
| 283 | Psychogenic Alopecia                 | Amy L. Pike, DVM, DACVB, IAABC-CDBC | / 991 |
| 284 | Urine Marking                        | Amy L. Pike, DVM, DACVB, IAABC-CDBC | / 995 |

## Section 7: Cytology

|     |                            |                                                                                           |        |
|-----|----------------------------|-------------------------------------------------------------------------------------------|--------|
| 285 | Ascites                    | Linda F. Meola, DVM, DACVP                                                                | / 1001 |
| 286 | Carcinoma Cytology         | Andrew G. Burton, BVSc, DACVP and Amy C. Valenciano, DVM, MS, DACVP                       | / 1007 |
| 287 | Hepatic Lipidosis Cytology | Linda F. Meola, DVM, DACVP                                                                | / 1009 |
| 288 | Lymph Node Disease         | Linda F. Meola, DVM, DACVP                                                                | / 1011 |
| 289 | Lymphoma Cytology          | Laura A. Snyder, DVM, DACVP and Amy C. Valenciano, DVM, MS, DACVP                         | / 1014 |
| 290 | Mast Cell Tumor Cytology   | Andrew G. Burton, BVSc, DACVP and Amy C. Valenciano, DVM, MS, DACVP                       | / 1016 |
| 291 | Pleural Effusion Cytology  | Emma C. Dewhurst, MAVetMB, DipECVCP, FRCPath, MRCVS and Amy C. Valenciano, DVM, MS, DACVP | / 1018 |
| 292 | Sample Staining            | Emma C. Dewhurst MAVetMB, DipECVCP, FRCPath, MRCVS and Amy C. Valenciano, DVM, MS, DACVP  | / 1023 |
| 293 | Sarcoma Cytology           | Andrew G. Burton, BVSc, DACVP and Amy C. Valenciano, DVM, MS, DACVP                       | / 1025 |

## Section 8: Topics of Special Interest

|     |                                                                  |                                                                                                       |        |
|-----|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------|
| 294 | Acupuncture: An Introduction                                     | Bonnie Wright, DVM, DACVAA, CVPP, CVMA, CCRP, CCRT                                                    | / 1029 |
| 295 | Catnip Effects in Cats                                           | Sharon Fooshee Grace, MS, M Agric, DVM, Diplomate ACVIM (SAIM)                                        | / 1033 |
| 296 | Chiropractic Care for Feline Patients                            | Amy Birdwell, DVM, CVA, CVCH                                                                          | / 1034 |
| 297 | End of Life Issues: General Principles and Ethics                | William Ray Folger, DVM, MS, DABVP (Feline)                                                           | / 1036 |
| 298 | End of Life Issues: Hospice and Palliative Care                  | William Ray Folger, DVM, MS, DABVP (Feline)                                                           | / 1038 |
| 299 | Euthanasia                                                       | William Ray Folger, DVM, MS, DABVP (Feline)                                                           | / 1042 |
| 300 | Genetic Diseases and Counseling Recommendations of Domestic Cats | Leslie A. Lyons, PhD                                                                                  | / 1046 |
| 301 | Age Approximation                                                | Fernanda Vieira Amorim da Costa, DVM, MSc, PhD and Lisa Restine Drylewicz, DVM, DABVP (Feline)        | / 1050 |
| 302 | Laboratory Animal Science: Cats as Disease Models for Humans     | Steven E. Davison, DVM, DACLAM and Michael K. Fink, DVM, PhD, DACLAM                                  | / 1053 |
| 303 | Nutrition                                                        | Maryanne Murphy, DVM, PhD, DACVIM (Nutrition) and Angela Witzel Rollins, DVM, PhD, DACVIM (Nutrition) | / 1055 |
| 304 | Pediatric/Neonate Normals and Care                               | Lisa Durso Keel, DVM, DABVP (Canine and Feline)                                                       | / 1059 |
| 305 | Polydactylism                                                    | Sharon Fooshee Grace, MS, M Agric, DVM, Diplomate ACVIM (SAIM)                                        | / 1062 |
| 306 | Purring                                                          | Sharon Fooshee Grace, MS, M Agric, DVM, Diplomate ACVIM (SAIM)                                        | / 1064 |
| 307 | Rehabilitation                                                   | Mary Ellen Goldberg, LVT, CVT, SRA, CCRVN, CVPP                                                       | / 1066 |
| 308 | Senior Care                                                      | Erin Dresner, DVM, MS, cVMA, DABVP (Feline Practice)                                                  | / 1069 |
| 309 | Vibrissae                                                        | Sharon Fooshee Grace, MS, M Agric, DVM, Diplomate ACVIM (SAIM)                                        | / 1074 |