American College of Veterinary Internal Medicine (ACVIM)
Large Animal Internal Medicine (LAIM)
Test Specifications

A. Laboratory Diagnostics	**5%**
1. Describe factors that affect the diagnostic results of a sample (e.g., collection, handling, interactions, methodology, spurious results, timing)	
2. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, and monitoring plan based on alterations of clinical pathology results (e.g., acute phase proteins, hemogram, lactate, leukogram)	
3. Recognize prognostic significance of abnormalities of lab diagnostics	
4. Recognize breed, species, and age differences in clinical pathology reference values	
5. Interpret results of an aseptic culture	
6. Interpret herd-based diagnostics to develop treatment protocols	
7. Choose appropriate genetic tests for various diseases as indicated	
8. Identify and justify appropriate samples needed for collection during gross post mortem examination	
9. Interpret gross postmortem examination findings and/or reports in light of clinical findings	
10. Interpret cytology and histopathology reports	
B. Pharmacology & Toxicology	**5%**
1. Select appropriate pharmaceutical for a specific disease or disease complex for a given species taking into account its age and use	
2. Create an appropriate dosing regime (i.e., dose, route, and frequency of administration) based upon an understanding of the mechanism of action and pharmacokinetics for a given species taking into account its age and use (e.g., analgesics, anesthetics, anticonvulsives, antifungals, antibacterials, antivirals, chemotherapeutics, corticosteroids, NSAIDs, sedatives)	
3. Interpret therapeutic drug monitoring for common pharmaceuticals (e.g., aminoglycosides, anticonvulsant, cardiac drugs)	
4. Identify appropriate monitoring plan, assess risks and complications of therapeutic pharmaceutical treatment, and respond to patient changes/status by adaptation of monitoring, treatment/management plans	
5. Identify pharmaceuticals that are approved or prohibited for use in food animals and minor species and recognize the legislation governing extra-label drug use in a given jurisdiction (e.g., AMDUCA, ELDU, FARAD, VCPR)	
6. Formulate therapeutic plans using antimicrobial stewardship and responsible prescribing in large animals (e.g., breakpoint, first line vs. reserve antibiotics, MIC)	
7. Select pharmaceuticals based on the concepts of withdrawal times, both animal product (including milk & meat) and competition (e.g., racing, show) and the influence of dose and route of administration	
8. Assess environmental conditions (e.g., contaminants, debris, events, human contact, plants), nutrition, water sources, cross species contact in relation to historical relevance to individual and/or herd toxicant access	
9. Interpret physical exam and herd data findings suggestive of toxicities	
10. Formulate an appropriate differential diagnosis list and achieve a diagnosis for disorders caused by toxicants (e.g., feed additives, feed deficiencies, industrial toxicants, metals/inorganic compounds, mycotoxins, organic compounds, rodenticides/pesticides, therapeutic agents, toxic plants, zootoxins)	
11. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings relating to disorders caused by toxicants (e.g., feed samples, plant, necropsy, water, toxicologic analysis [body fluids/organs, ingesta, serum, urine])	
12. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to disorders caused by toxicants	
C. Fluids, Electrolytes & Acid Bases	**6%**
1. Interpret physical exam findings suggestive of dehydration, hypovolemia, and electrolyte derangements	

2. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings relating to dehydration, hypovolemia and electrolyte derangements (e.g., anion gap/acid-base, blood gas, calf bicarb score, chemistry, PCV/TP, Stewart vs. Henderson-Hasselbach, USG)
3. Calculate dose and rate to administer appropriate intravenous, enteral, rectal, peritoneal, IO, and SC fluids (e.g., blood products, colloids, crystalloids)
4. Appraise the properties of different intravenous fluids (e.g., blood products, colloids, crystalloids)
5. Identify when a blood or plasma transfusion is warranted, identify a suitable donor, and manage potential complications
6. Formulate and monitor a general fluid therapy plan to include resuscitation, rehydration, correction of acid-base imbalances, maintenance, and ongoing losses
7. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, and monitoring plan for electrolyte derangements and fluid imbalances, including age and species differences, related to:
a. abomasal and upper gastro-intestinal obstructions
b. acute neurologic injury
c. acute respiratory distress syndrome
d. burns
e. diarrhea and colitis
f. heart failure
g. hemorrhagic shock
h. hyperkalemic periodic paralysis
i. hypoproteinemia
j. liver dysfunction and failure
k. obstructive urolithiasis
l. organic and inorganic metabolic acidosis
m. renal failure
n. rhabdomyolysis
o. sepsis
D. Cardiology **4%**
1. Interpret physical exam findings suggestive of cardiac conditions
2. Interpret abnormalities in cardiac rate, rhythm, and sounds identified during auscultation
3. Formulate an appropriate differential diagnosis list and achieve a diagnosis for cardiac conditions (e.g., arrhythmia, cardiac neoplasia, congenital, congestive heart failure, endocarditis, myocarditis, pericarditis, structural, valvular disease)
4. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to cardiac conditions (e.g., basic echocardiogram, cardiac troponin, ECG, pericardiocentesis, serum electrolytes)
5. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to cardiac conditions
E. Dermatology **1%**
1. Interpret physical exam findings suggestive of primary dermatological disease vs. manifestation of systemic illness
2. Interpret skin biopsy reports
3. Formulate an appropriate differential diagnosis list and achieve a diagnosis for skin conditions (e.g., autoimmune, bacterial, fungal, genetic, hypersensitivity, idiopathic, neoplastic, nutritional, parasitic, toxic, viral)
4. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to dermatological conditions (e.g., biopsy, FNA, skin testing)
5. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to dermatological conditions

6. Differentiate between the different types of cutaneous masses (e.g. neoplasia, viral)	
F. Endocrine System	**5%**
1. Interpret physical exam findings suggestive of endocrine disease or dysfunction	
2. Formulate an appropriate differential diagnosis list and achieve a diagnosis for diseases or dysfunctions of the:	
a. adrenal glands (e.g., pheochromocytoma)	
b. thyroid glands (e.g., congenital, hyperthyroidism, hypothyroidism, neoplasia)	
c. pancreas (e.g., insulinoma, necrosis)	
d. hypothalamic and pituitary glands (e.g., PPID)	
e. parathyroid glands (e.g., hyperparathyroidism)	
f. sweat glands (e.g., anhidrosis)	
3. Explain physiologic mechanisms, parameters, biomarkers, and diagnostic testing (including timing of sample collection) for equine metabolic syndrome and/or PPID	
4. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings for common endocrine disease/dysfunction in the context of individual patient and environmental factors and/or concurrent disease	
5. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to endocrine conditions	
6. Explain appropriate treatment and monitoring plans for equine metabolic syndrome, including dietary management	
G. Gastrointestinal System	**10%**
1. Interpret physical exam findings suggestive of gastrointestinal disease	
2. Interpret abnormalities in gastrointestinal auscultation/percussion/succussion (e.g., displaced abomasum, rumen)	
3. Formulate an appropriate differential diagnosis list and achieve a diagnosis for gastrointestinal conditions:	
a. Oral, dental, and periodontal diseases (e.g., dysphagia, infections, mass, vesicular)	
b. Esophageal diseases (e.g. obstructive, neoplasia, traumatic)	
c. Gastric diseases in monogastric animals (e.g., functional disorders, impaction, neoplasia, ulcers)	
d. Reticuloruminal, abomasal, or third compartment diseases (e.g., bloat, functional disorders, displacements, hardware, impaction, neoplasia, ulcers)	
e. Intestinal diseases (e.g., inflammatory, infectious [bacterial, viral], infiltrative, neoplasia, obstructive, parasitic, toxic)	
f. Peritoneum diseases (e.g., non-septic, septic)	
g. Disorders requiring surgical intervention and post operative complications	
4. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to gastrointestinal conditions (e.g., abdominocentesis, biopsy of the gastrointestinal tract, clinical pathology results, endoscopy of the upper gastrointestinal system, exploratory celiotomy, fecal and serological testing, gastrointestinal absorption tests, nasogastric intubation, oral examination, per-rectum palpation, ruminal and abomasal fluid sample analysis, ultrasonography and radiography of the gastrointestinal tract)	
5. Create a screening and diagnostic plan for enteric pathogens, interpret results and develop a treatment, management, and biosecurity plan (e.g., Clostridial diseases, Coronavirus, Rotavirus, Salmonella)	
6. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to gastrointestinal conditions	
7. Assess parasite management (herd or individual level), especially in cases of anthelmintic resistance	
H. Hemolymphatic System	**5%**
1. Interpret physical exam findings suggestive of hemolymphatic disease (e.g., ecchymosis, edema, hematuria, hemorrhage, icterus, petechia, vasculitis)	
2. Formulate an appropriate differential diagnosis list and achieve a diagnosis for hemolymphatic conditions (e.g., acute/chronic blood loss, BLV, coagulation abnormalities, congenital, EIA, EVA, emboli, hemolytic anemia, immune mediated anemia, infectious disease [bacterial, parasitic, viral], neoplasm [lymphoma], nutrient deficiencies, thrombocytopenia, thrombus, toxicities, vasculitis)	

3. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to hemolymphatic conditions (e.g., bone marrow biopsy and core aspirate, clotting factor concentrations, clotting times, complete blood count, LN aspirate, LN biopsy, serum iron, serology, serum biochemical profile, TEG, total iron-binding capacity, vascular/tissue ultrasound	
4. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to the hemolymphatic system	
I. Hepatobiliary System	**5%**
1. Interpret physical exam findings suggestive of hepatobiliary disease (e.g., ascites, colic, CNS, dermatitis, diarrhea, icterus, pruritus, weight loss)	
2. Formulate an appropriate differential diagnosis list and achieve a diagnosis for hepatobiliary diseases (e.g., biliary tract disease, hepatic lipidosis, hepatitis [bacterial, toxic, viral], immune mediated, parasitic)	
3. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to hepatobiliary conditions (e.g., ammonia, biopsy, chemistry [including bile acids], culture, molecular tests, triglycerides, ultrasound)	
4. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to hepatobiliary abnormalities	
J. Metabolism & Nutrition	**6%**
1. Formulate appropriate parenteral and/or enteral dietary plan for a healthy or sick neonate	
2. Formulate appropriate parenteral and/or enteral dietary plan and medical management for a sick adult patient (e.g., gastrointestinal, hepatic, musculoskeletal, neurologic, renal disease)	
3. Formulate appropriate parenteral and/or enteral dietary plan and medical management for obese or malnourished patients	
4. Recognize refeeding syndrome and formulate an appropriate diagnostic plan, dietary and treatment plan, monitoring plan, and prognosis	
5. Describe a dietary plan for a patient with systemic diseases (e.g., EMS, HYPP, PPID, PSSM, RDC, RER)	
6. Identify the etiology, diagnosis, treatment, and prevention of common nutritional disorders: deficiency or excess (e.g., copper, iron, magnesium, selenium, vitamins)	
7. Appraise the pathophysiology and predisposing factors for metabolic/nutritional diseases (e.g., hepatic lipidosis, hyperlipidosis, ketosis, hypokalemia, milk fever, pregnancy toxemia)	
8. Formulate an appropriate treatment, prognosis, and monitoring plan for abnormalities relating to metabolic/nutritional diseases (e.g., hyperlipidosis, hepatic lipidosis, ketosis, pregnancy toxemia, milk fever, hypokalemia)	
9. Explain the concept of, and integrate a diet for, DCAB for management of metabolic disease (e.g. management of periparturient ruminants)	
10. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to metabolic disease (e.g., fractional excretion, serum insulin, serum triglycerides and cholesterol, serum vitamin and electrolyte concentrations, urine and blood ketones)	
K. Musculoskeletal System	**5%**
1. Interpret physical exam findings suggestive of musculoskeletal disease	
2. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to musculoskeletal conditions (e.g., EMG, exercise testing, genetic testing, muscle biopsy, serum chemistry, ultrasound, urinalysis)	
3. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, and monitoring plan for disorders of muscle function (e.g., ear ticks, electrolyte disturbances, hypocalcemia, shivers, synchronous diaphragmatic flutter)	
4. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, and monitoring plan for exertional myopathies (e.g., acute and recurrent rhabdomyolysis, MH, myofibrillar myopathy, and fibrotic myopathy, PSSM)	
5. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, and monitoring plan for musculoskeletal abnormalities of the neonate (e.g., flexural and angular limb deformities, incomplete ossification, rib fractures, septic arthritis/osteomyelitis)	
6. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, and monitoring plan for non-exertional myopathies or bone related disorders (e.g., genetic, immune-mediated, infectious, myotonia, nutritional, toxic, traumatic)	
7. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, prevention, and monitoring plan for laminitis	
8. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, prevention, and monitoring plan for ruminant lameness	
9. Formulate an appropriate differential diagnosis list for muscle atrophy	
L. Neurology	**7%**
1. Interpret neurological exam findings in order to localize neuroanatomical lesion	

2. Differentiate peripheral from central neurologic disease	
3. Formulate an appropriate differential diagnosis list and achieve a diagnosis for neurologic conditions:	
a. Forebrain (e.g., congenital, degenerative, idiopathic [headshaking], immune-mediated, infectious [bacterial meningitis, viral encephalitis], inflammatory, neoplasia, toxic [polioencephalomalacia], trauma)	
b. Brain stem and cranial nerve (e.g., congenital, degenerative [THO], idiopathic, immune-mediated, infectious [guttural pouch, listeriosis, otitis], inflammatory, neoplasia, toxic, trauma)	
c. Cerebellar (e.g., neoplasia, congenital, infectious, immune-mediated, inflammatory, idiopathic, toxic, trauma, degenerative)	
d. Spinal cord (e.g., compressive, congenital, degenerative, idiopathic, infectious [parasitic, protozoal, viral], inflammatory, neoplasia, toxic, trauma)	
e. Motor unit (e.g., congenital, degenerative, infectious [botulism, tetanus], toxic/nutritional [equine motor neuron disease])	
f. Peripheral nerve (e.g., compressive, degenerative, neoplasia, toxic, trauma)	
g. Storage, nutritional, and metabolic diseases (e.g., congenital, genetic, toxic)	
h. Systemic diseases causing neurologic abnormalities (e.g., hepatic encephalopathy, hyperammonemia, kernicterus, uremic encephalopathy)	
4. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to neurologic conditions	
5. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to neurological conditions (e.g., cerebrospinal fluid analysis, clinical pathology results, computed tomography, culture, electroencephalogram, electromyography, magnetic resonance imaging, molecular, myelography, radiography, serology)	
6. Create a screening plan, diagnostic plan, and biosecurity plan for infectious or transmissible neurologic diseases (e.g., equine herpesvirus, rabies, spongiform encephalopathies)	
7. Recognize the indications and complications for various methods of managing a recumbent large animal	
M. Ophthalmology	**2%**
1. Interpret abnormalities of an ophthalmological exam	
2. Formulate an appropriate differential diagnosis list and achieve a diagnosis for ophthalmological conditions (e.g., corneal ulcer and/or abscess, infectious/parasitic causes of ocular disease, keratitis, neoplasia, retinal detachment, uveitis)	
3. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to ophthalmological conditions	
4. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to ophthalmological conditions (e.g., corneal cytology, fluorescein and Rose Bengal staining, histology, intraocular pressure, Schirmer tear test, trans-palpebral ocular ultrasonography)	
5. Recognize indications and complications for ocular management and/or treatment (e.g., intravitreal injections, subpalpebral lavage system)	
6. Formulate herd level control and prevention strategies for infectious ocular conditions in ruminants (e.g., caprine herpes, keratoconjunctivitis, mycoplasma)	
7. Recognize ocular manifestation of systemic disease	
N. Reproductive System	**3%**
1. Interpret physical exam findings suggestive of disease of the reproductive tract (e.g., abortion, cryptorchidism, dystocia, GCT, hydrops, mass, mastitis, metritis, placentitis, retained fetal membranes, trauma)	
2. Formulate an appropriate differential diagnosis list and achieve a diagnosis for reproductive conditions (e.g., abortion [bacterial, caterpillars , protozoa, toxic, twins, viral], cryptorchidism, dystocia, GCT, hydrops, mass, mastitis, metritis, placentitis, retained fetal membranes, trauma)	
3. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to reproductive conditions (e.g., AMH, amniocentesis, CMT, culture, fetal heart rate, hormone testing, molecular diagnostics, placental assessment, testosterone, ultrasound)	
4. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to common medical reproductive conditions (e.g., abortion, dystocia, GCT, hydrops, mass, retained fetal membranes)	
5. Recognize and manage zoonotic diseases of the reproductive tract	
6. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for mastitis	
O. Respiratory System	**9%**
1. Interpret physical exam findings suggestive of respiratory tract conditions	

2. Formulate an appropriate differential diagnosis list and achieve a diagnosis for respiratory conditions:	
a. upper airway disease (e.g., BRD, congenital, laryngeal, pharyngeal)	
b. lower airway disease (e.g., BRD, congenital, EIPH, equine asthma, infectious vs. non-infectious, mycoplasma, TB)	
c. paranasal pathology (e.g., congenital, ethmoid, sinusitis)	
d. guttural pouch disease (e.g., congenital, empyema, mycosis, tympany)	
e. toxin exposure (e.g., poisonous plants, smoke)	
f. Pulmonary hypertension and/or cor pulmonale in cattle	
3. Identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to respiratory conditions (e.g., BAL, biopsies, cultures, endoscopies, molecular tests, pulmonary function tests, radiographs, scintigraphy, thoracocentesis, TTW, ultrasound)	
4. Formulate an appropriate treatment, prognosis, prevention (heard vs. individual), and monitoring plan for abnormalities relating to respiratory conditions	
P. Urinary System	**5%**
1. Interpret physical exam findings suggestive of urinary tract diseases	
2. Formulate an appropriate differential diagnosis list and achieve a diagnosis for urinary tract conditions:	
a. kidney disease (e.g., AKI, CKD, infectious, protein-losing nephropathy, RTA)	
b. ureteral disease (e.g., ureteroliths)	
c. bladder disease (e.g., cystoliths, infection, neoplasia)	
d. urethral disease (e.g., obstruction)	
3. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings related to renal conditions, renal dysfunction, and detection of renal injury (e.g., fractional excretion, serum electrolytes, urinalysis, renal biopsy)	
4. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, and monitoring plan for:	
a. Polyuria/polydipsia (e.g. diabetes insipidus, psychogenic)	
b. Urinary incontinence	
c. Ruminant urolithiasis	
5. Formulate an appropriate treatment, prognosis, prevention, and monitoring plan for abnormalities relating to urinary tract conditions	
Q. Infectious/Zoonotic Disease & Biosecurity	**5%**
1. Assess risk of transmission based on agent, host, and environment	
2. Assess risk of zoonotic potential to at-risk populations	
3. Develop and/or assess a comprehensive biosecurity plan for common large animal infectious diseases (e.g., BVD, CAE, CL, OPP, pigeon fever)	
4. Formulate an isolation and management plan for individual animals based on pathogenic type (e.g., enteric, neuro, respiratory)	
5. Formulate a biosecurity, diagnostic, and treatment plan for a herd outbreak	
6. Recognize the clinical signs of, and risks from, emerging, reportable, and foreign animal diseases	
R. Neonatology	**6%**
1. Interpret physical examination on a neonate (i.e., breed predilections, congenital, normal TPR, pre/dys/maturity, sepsis score)	
2. Formulate an appropriate differential diagnosis list and achieve a diagnosis related to neonatal conditions (e.g., atresia, cardiac, diarrhea/GIT, FPT, hepatobiliary [Tyzzer's], meconium impaction, musculoskeletal abnormalities, neonatal maladjustment syndrome, pre/dys/maturity, seizures, sepsis, urinary/umbilical abnormalities)	
3. Formulate an appropriate treatment prognosis, prevention, and monitoring plan for abnormalities relating to the neonate (e.g., atresia, cardiac, diarrhea/GIT, FPT, hepatobiliary [Tyzzer's], meconium impaction, musculoskeletal abnormalities, neonatal maladjustment syndrome, pre/dys/maturity, seizures, sepsis, urinary/umbilical abnormalities)	
4. Formulate a diagnostic plan and identify appropriate diagnostic test, assess risks and complications of test, and interpret diagnostic results in light of findings in the sick neonate (e.g., blood culture, blood pressure measurements, blood tests (ABG, CBC, chemistry, IgG, VBG), culture, molecular tests, radiographs, toxin assays, ultrasound)	

5. Formulate a neonatal oxygen supplementation plan (e.g., intranasal, tracheal) or mechanical ventilation, including indications and complications	
6. Appraise the processes of fetal development, adaptation to extra-uterine life, and differences in physiology between neonates, growing, and adult animals	
7. Devise a plan for colostrum management in the individual neonates and herd	
8. Assess the impact of maternal systemic disease on neonatal health and development	
S. Critical Care	**6%**
1. Identify clinical findings consistent with systemic inflammatory response syndrome, sepsis, septic shock, and multiorgan dysfunction syndrome in different ages and species	
2. Formulate an appropriate differential diagnosis list, diagnostic plan, prognosis, treatment, and monitoring plan for critical patients of different ages and species	
3. Recognize indications and interpretations of arterial and central venous pressure monitoring by various methods	
4. Assess degree of pain using available pain scales (e.g., choose appropriate scale, measure pain, interpret)	
5. Develop a pain management plan and explain indications and complications (e.g., epidural, local, topical, systemic)	
6. Formulate an oxygen supplementation plan (e.g., intranasal, tracheal) for an adult patient	
7. Recognize indications and complications of a tracheotomy	
8. Identify abdominal compartment syndrome and implement appropriate treatment	