

Academy of Veterinary Surgical Technicians

Small Animal Advanced Surgical Skills Form - Form 3

The applicant is required to state whether or not he/she has mastered the skills on this form. The AVST is aware that some states or provinces may not allow a task to be performed by a credentialed veterinary technician. The AVST requires that a Veterinary Technician Specialist (of any specialty) or a veterinarian who has mastered the skill attest to your mastery of each skill on this form. Please ensure that each testifier signing and validating any particular skill is the same person listed as the primary clinician in your case log summary or on your case report.

Mastery is defined as possessing an outstanding skill or having expertise. The applicant must be able to perform the task safely, with a high degree of success, and without being coached or prompted. Mastery requires having performed the task in a wide variety of patients, situations, and many times.

Aseptic Technique

A VTS (Surgery) plays an integral role in maintaining asepsis under a variety of conditions. Aseptic technique is described as a set of specific practices and procedures performed under carefully controlled conditions with the goal of minimizing contamination by pathogens.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
1	Demonstrate maintenance of asepsis in the OR with appropriate use of surface disinfectants and contact times			
2	Demonstrate maintenance of asepsis in the OR with appropriate use of various types of antiseptics and contact times			
3	Demonstrate asepsis in the OR with appropriate OR conduct while acting as a circulating nurse (e.g. pouring sterile lavage, issuing sterile items, passing between sterile field and adjacent sterile personnel)			
4	Demonstrate asepsis outside of the OR for a variety of procedures (<u>minimum of 2</u>) (e.g. sterile gloving for wound care, use of personal protection equipment to prevent spread of contagious pathogens)			
5	Perform a surgical hand scrub using a water-based scrub (e.g. 2% chlorhexidine scrub)			
6	Perform a surgical hand scrub using an alcohol-based scrub (e.g. Avagard™, Sterillium®)			
7	Perform open gloving technique			
8	Perform closed gloving technique			
9	Perform assisted gloving technique			
10	Demonstrate proper OR technique in the event of contamination (e.g. use of sleeves, re-gloving, re-gowning techniques)			

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Operating Room Techniques

A VTS (Surgery) must be able to perform successfully in a surgical suite to reduce the overall time of the procedure, reduce contamination, and maintain the patient's well-being as the highest priority.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
CIRCULATING NURSE DUTIES:				
11	Properly set-up an OR and possess anticipatory skills regarding needed equipment and instrumentation for a wide variety of soft tissue procedures (<u>minimum of 4</u>) (e.g. abdominal, thoracic, perineal, urogenital, endocrine, integument, head/neck and aural)			
12	Properly set-up an OR and possess anticipatory skills regarding needed equipment and instrumentation for a variety of orthopedic and neurologic procedures (<u>minimum of 4</u>) (e.g. fracture repair, TPLO, corrective osteotomies, hemilaminectomies, ventral slots)			
13	Properly set-up an OR and possess anticipatory skills regarding needed equipment and instrumentation for minimally invasive surgical procedures (e.g. laparoscopic procedures, arthroscopy, MIPO, C-Arm/fluoroscopy guided procedures)			
14	Properly set-up an OR and possess anticipatory skills regarding needed equipment and instrumentation for ophthalmic surgical procedures (e.g. enucleation, blepharoplasty, phacoemulsification)			
SCRUB NURSE DUTIES:				
15	Possess anticipatory skills and demonstrate appropriate tissue handling and/or passing of instrumentation while assisting the surgeon during abdominal procedures			
16	Possess anticipatory skills and demonstrate appropriate tissue handling and/or passing of instrumentation while assisting the surgeon during thoracic procedures			
17	Possess anticipatory skills and demonstrate appropriate tissue handling and/or passing of instrumentation while assisting the surgeon during orthopedic and neurologic procedures			
18	Possess anticipatory skills and demonstrate appropriate handling and passing of instrumentation while assisting the surgeon during minimally invasive procedures			

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Equipment

A VTS (Surgery) must have knowledge of various equipment specific to surgery, including proper applications, identification, care, maintenance, and troubleshooting.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
19	The ability/knowledge to set-up, maintain, and troubleshoot various types of equipment used for orthopedic and neurologic surgery (<u>minimum of 4</u>) (e.g. nitrogen powered equipment, battery powered equipment)			
20	The ability/knowledge to set-up, maintain, and troubleshoot various types of equipment used for arthroscopic surgery (<u>minimum of 4</u>) (e.g. video/picture capture devices, arthroscopic shaving devices, fluid delivery systems and camera and arthroscope handling)			
21	The ability/knowledge to set-up, maintain, and troubleshoot various types of equipment used for laparoscopic and thorascopic surgery (<u>minimum of 4</u>) (e.g. video/picture capture devices, insufflation devices/equipment, and suction/lavage systems)			
22	The ability/knowledge to set-up, maintain, and troubleshoot equipment used for class IV, CO2 and diode laser surgery (e.g. appropriate PPE, signs, laser tips, suction)			
23	The ability/knowledge to set-up, maintain, troubleshoot and understand indications for various stapling or vessel sealing equipment (<u>minimum of 4</u>) (e.g. LDS, GIA, EEA, TA, Ligasure™, Surgiclip™, Hemoclips)			
24	The ability/knowledge to set-up, maintain, troubleshoot, and understand indications for electrocautery units			
25	The ability/knowledge to set-up, maintain, troubleshoot, and understand indications for portable or central suction units and suction instrumentation			

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Instrumentation

A VTS (Surgery) must demonstrate advanced knowledge in the application or use of all surgical instrumentation, including care and maintenance.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
	PROCEDURE SPECIFIC INSTRUMENTATION:			
26	Identify, maintain, and explain indications of specific soft tissue surgical instrumentation for a variety of soft tissue procedures (<u>minimum of 4</u>) (e.g. Satinsky clamps, doyens, right angled clamps, ameroid constrictors)			
27	Identify, maintain, and explain indications of orthopedic and neurologic surgical instrumentation for a variety of procedures (<u>minimum of 4</u>) (e.g. ronguers, burrs, elevators, dural hooks, drill sleeves, drill guides, taps and countersinks, various screw and IM pin sizes and types)			
28	Identify, maintain, and explain indications for specific ophthalmic instrumentation (e.g. speculums, Castroviejo needle holders, lacrimal cannulas, Iris scissors)			
29	Identify, maintain, and explain indications for joint replacement instrumentation (e.g. power equipment types, reaming devices, cemented vs. non-cemented uses)			

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Surgical Instrument Care and Sterilization Methods

A VTS (Surgery) must have knowledge of various sterilization methods. Sterilization is the process of destroying all microorganisms in or on a given environment to prevent infection.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
30	Know products and application recommendations for enzymatic cleaning of surgical instruments			
31	Know application, maintenance, and troubleshooting of ultrasonic cleaners			
32	Know appropriate application of products used for the lubrication of surgical instruments			
33	Know appropriate use, application and disposal of products used for high-level disinfection of surgical instruments (e.g. glutaraldehyde, OPA)			
34	Set-up, load, maintain, troubleshoot, and know how to assess sterility when using either ethylene oxide or hydrogen peroxide gas plasma sterilization			
35	Set-up, load, maintain, troubleshoot, and know how to assess sterility when using steam sterilization			
36	Obtain certification for use of either ethylene oxide or hydrogen peroxide gas plasma sterilization			
37	Demonstrate proficiency in preparing surgical packs using class II wraps (drape materials made of paper, linen or SMS polypropylene)			
38	Demonstrate proficiency in the proper use of peel pouches (plastic/paper combinations) for individually processed items, including double pouch techniques			
39	Demonstrate knowledge of shelf life of sterile goods for various sterilization methods (<u>minimum of 2</u>) such as EO, hydrogen peroxide gas plasma, or steam			
40	Perform a biological test for any type of sterilizer and evaluate the results			

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Surgical Procedures

A VTS (Surgery) must have a diverse surgical procedure knowledge base. A surgical procedure is a medical procedure involving an incision with instruments performed to repair damage or arrest disease in a living body.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
	PATIENT PREPARATION AND POSITIONING:			
41	Perform an appropriate surgical clip and aseptic prep application on intact epithelium			
42	Perform an appropriate surgical clip and aseptic prep application on torn or denuded epithelium			
43	Identify the appropriate anatomic landmarks for various soft tissue surgical procedures (<u>minimum of 4</u>) (e.g. adrenalectomy, thyroidectomy, perineal hernia) including performing an appropriate surgical clip, aseptic prep application and properly positioning the patient for surgery			
44	Identify appropriate anatomic landmarks for various orthopedic and neurologic procedures (<u>minimum of 4</u>) (e.g. ligament repair, joint replacement, ventral slot, hemilaminectomy), perform an appropriate surgical clip, aseptic prep application, and properly position the patient for surgery			
45	Identify appropriate anatomic landmarks for various minimally invasive procedures (<u>minimum of 4</u>) (e.g. laparoscopic cryptorchidectomy or liver biopsy, arthroscopy, C-Arm/fluoroscopy guided procedures), perform an appropriate surgical clip, aseptic prep application, and properly position the patient for surgery			
46	Identify appropriate anatomic landmarks for various ophthalmologic procedures (<u>minimum of 2</u>) (e.g. enucleation) and perform an appropriate surgical clip, aseptic prep application, and properly position the patient for surgery			
	SURGICAL CARE EXPERTISE:			

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	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
47	Demonstrate an advanced knowledge of various types of soft tissue procedures (<u>minimum of 4</u>) including, but not limited to: abdominal, thoracic, perineal, urogenital, integument, endocrine, head/ neck and aural procedures			
48	Demonstrate an advanced knowledge of various methods used for orthopedic and neurologic procedures (<u>minimum of 4</u>) such as using minimally invasive or external fixation techniques (e.g. external ring fixators), ORIF (e.g. plating or IM pin fixation), tenotomy or neurectomy procedures and/or joint replacement techniques			
49	Demonstrate knowledge of orthopedic surgical procedures utilizing allograft products or autograft techniques			
50	Demonstrate an advanced knowledge of various types of minimally invasive surgical procedures (<u>minimum of 4</u>) (laparoscopic, arthroscopic, etc.)			
51	Demonstrate an advanced knowledge of ophthalmic surgical procedures			
52	Identify various suture patterns and indications (<u>minimum of 2</u>)			
53	Demonstrate knowledge of the appropriate use of various suture materials (<u>minimum of 2</u>) in different procedures, tissue layers or organs			
54	Demonstrate knowledge of intraoperative coagulation aids (e.g. Surgicel®, Gelfoam®)			

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Bandaging and Wound Management

Bandages are materials used to protect, immobilize, compress, or support a wound or injured area of the body. A VTS (Surgery) must possess knowledge in external coaptation methods and wound care techniques.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
55	Demonstrate knowledge regarding the phases of wound healing and proper wound management			
56	Demonstrate knowledge of moist wound healing and different primary layers available (e.g. calcium alginate, polyurethane, honey, hydrogel)			
57	Identify bandage materials and properly place a variety of bandages (<u>minimum of 2</u>) including, but not limited to: tie-over bandages, Robert Jones, modified Robert Jones, and wet-to-dry bandages			
58	Demonstrate an advanced knowledge of and indications for coaptation, including proper placement of splints and casts			
59	Evaluate a variety of bandages (<u>minimum of 4</u>) and demonstrate knowledge of potential complications			
60	Perform a proper wound lavage and select an appropriate solution or product for wounds			
61	Demonstrate the proper care of skin grafts or flaps			
62	Evaluate surgical wounds and incisions for potential complications (e.g. seroma, infection, dehiscence)			
63	Demonstrate knowledge and appropriate use of novel wound treatment therapies (biotherapy [e.g. maggots or leeches], hyperbaric oxygen chamber, class IIIa or IIIb low level laser therapy [LLLT])			
64	Maintain and know the indication for passive, active and vacuum assisted drains			

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Pharmacology and Laboratory

A VTS (Surgery) needs to understand indications and usage guidelines for a variety of antimicrobial agents used in the perioperative period.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
65	Demonstrate indications and appropriate use of peri-operative antibiotics including beta-lactam and fluoroquinolone antibiotics			
66	Demonstrate indications and appropriate use of antimicrobials used for topical wound management and/or burns			
67	Demonstrate indications and appropriate use of time-released antibiotic impregnated gels/liquids (e.g. Clinzgard®, R-Gel)			
68	Demonstrate proper tissue handling of samples submitted for histology (e.g. formalin ratios, inking or labeling margins)			
69	Demonstrate proper specimen handling of fluid and tissue samples collected for culture and cytology			

Personal Safety

Maintaining an individual's safety is imperative while working in a surgical environment.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
70	Demonstrate proper radiation safety and the importance of limited exposure			
71	Demonstrate proper fluoroscopy/C-ARM safety in a surgical setting			

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Adjunct Surgical Skills

A VTS (Surgery) needs to be well rounded and have advanced knowledge and skills in other areas considered pivotal in the management of surgical patients.

	Skill	Mastered (Date observed)	Signature of DVM / VTS	Reference Case #(s)
72	Demonstrate advanced knowledge and ability to obtain high-quality diagnostic orthopedic radiographs for a variety of procedures (<u>minimum of 2</u>)			
73	Demonstrate use of interventional radiology techniques (e.g. tracheal stent placement, fluoroscopy-assisted closed fracture reduction)			
74	Demonstrate knowledge, indications for and ability to care for and maintain chest tubes			
75	Demonstrate knowledge and ability to place purse string and/or finger trap suture			
76	Demonstrate knowledge and use of stem cell therapy			
77	Demonstrate knowledge and capabilities to perform industry accepted modalities of rehabilitation (e.g. heat therapy, cryotherapy, low level laser therapy [LLLT], extra-corporeal shock wave therapy [ESWT])			
78	Demonstrate advanced knowledge of at least <u>4</u> different methods of providing analgesia under a variety of circumstances (e.g. regional/epidural, parenteral, transdermal, local)			

Anatomy and Physiology Knowledge

To assist in surgery, a VTS (Surgery) must have a thorough understanding of the structures of the body and how they function. Throughout your logs and case reports we should be able to see that you have advanced knowledge of anatomy and physiology related to each surgical procedure (as outlined in skills 11-14) and be able to identify potential complications and post-operative considerations for each.

The AVST Small Animal Advanced Surgical Skills validation form follows on next page:

