

TABLE 5.7
Special Considerations in Oncologic Surgery

Principles of Oncologic Surgery	Rationale	Examples
Complete tumor excision with adequate margins when possible	Adequate excision decreases the risk of tumor recurrence.	Adequate margins vary by tumor type; examples include: <ul style="list-style-type: none"> • Low-grade mast cell tumors: 2 cm or proportional margins wide (lateral margins equivalent to the widest measured diameter of the tumor) and 1 fascial plane deep • Canine soft tissue sarcoma: >3 cm laterally and 1 fascial plane deep • Feline injection site sarcoma: 5 cm laterally and 2 fascial planes deep • Osteosarcoma: the entire affected bone or organ, or 2–3 cm of healthy bone (amputation is most frequent)
Ink specimen margins	Allows pathologists to distinguish actual margins from margins introduced during tissue processing. Also allows identification of which margins were closest, narrow, or incomplete.	Identify deep margin, lateral margins, proximal/distal, cranial/caudal, and dorsal/ventral as appropriate to the site.
Add markers/hemoclips around the surgical field	If postoperative imaging and radiation are pursued, such markers can aid in defining the target and act as fiducial markers for treatment setup.	Mark the circumference and deep margins of the surgical field.
Assess lymph nodes	Lymph node biopsy or excision is frequently a helpful and prognostic staging test that can be performed at the time of surgery.	Examples include: <ul style="list-style-type: none"> • Cervical lymph node excision when removing an oral tumor • Thoracic lymph node biopsy when removing a lung tumor • Popliteal lymph node excision when removing a mast cell tumor of the distal hindlimb
Minimize tumor seeding and contaminating other tissues	Tumor cells are easily seeded on instrument tracks and throughout the surgical site during mass removal. Seeding can result in regional recurrence.	<ul style="list-style-type: none"> • Avoid tumor manipulation and rupture during surgery. • Perform thorough lavage after mass removal (e.g., splenectomy). • Minimize bleeding in the surgical field. • Change instruments and gloves immediately after removal of the tumor (before reconstruction and closure).
Reconstruction and function preservation	Reconstruction should preserve function and minimize tension to the greatest extent possible. It should consider the impact of reconstruction on additional therapy (i.e., second surgery or radiation therapy).	In general, orient incisions along naturally existing tension lines, dependent on location. For example, orient incisions on the limb from proximal to distal rather than circumferentially.

The 2026 AAHA Oncology Guidelines for Dogs and Cats are available at aaha.org/oncology-guidelines.

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