In veterinary practice bone cancer can be a devastating diagnosis for a client. Traditionally treatment consisted of amputation of the affected limb followed by the administration of chemotherapy for bone tumors offers an alternative to amputation in a select group of patients. As an ACVS board certified surgeon, with additional training in oncologic surgery, I have performed numerous limb-sparing procedures for dogs with Osteosarcoma (OSA). Case selection is important for success. The best candidate is a dog with the tumor located in the distal radius (a common site for Osteosarcoma). The tumor cannot involve greater than 50% of the length of bone and the bone should not be fractured. The affected segment of bone is surgically excised and then replaced with a cortical allograft from a donor dog. The graft bone is attached to the host bone by use standard plating techniques.

I have used allografts provided by Veterinary Transplant Services, Inc in all my limb-spare patients for the past 8 years. My clients and I have been very pleased with the outcome. From the patient’s radiographs measurements are taken of the length and width of the bone and then VTS can find a close match in size from their supply. Most dogs that develop OSA are large breed dogs. I have used VTS allografts in dog’s as large as 110 pounds. Incorporation of the grafts has been documented through subsequent radiographs and through histopathologic examination in those patients who have died from metastatic OSA.

I have been impressed with the quality of the allografts, reliability of sterility and preservation, availability of a variety of sizes, prompt delivery and the follow-up service provided by VTS. None of the allografts I have used has failed or resulted in a clinical problem (e.g., infection). Clinically the result of a distal radius limb-spare returns the patient to a comfortable and functional gait within a few days to weeks of the procedure in the majority of patients. This procedure is especially beneficial for patients with arthritis or neurologic conditions that may not have a successful recovery from an amputation.

I would recommend VTS, Inc. for supplying allografts for bone tumor surgery as well as for bone replacement after major segmental bone loss due to trauma.

Case Example: 8 year old Male Castrated Golden Retriever with and OSA of the right distal radius:

1. AP radiographic view of bone tumor in distal radius.
2. Lat radiographic views Post-op limb-spare with allograft incorporated into the limb. Plate and screws fixation to stabilize allograft and result in a pancarpal arthrodesis.
3. Patient who is currently 3 months from surgery and has excellent use of the right forelimb.