Mast cell tumors (MCTs) are common in dogs. They can be very invasive and often regrow after surgical removal; they may also spread (metastasize). Some MCTs release histamine, which can cause swelling and bruising around the tumor. MCTs can be treated successfully if diagnosed early.

**Common Symptoms**

- **Mass lesion involving the skin or subcutaneous tissue at any body location:** Individual tumor appearance is highly variable —
  - Some lesions are ulcerated, others are covered with hair
  - Redness, bruising and fluid buildup (edema) can occur, and may worsen with manipulation or scratching
  - Tumors can fluctuate up and down in size
- **Enlarged lymph nodes:** Near areas of tumor involvement
- **Gastrointestinal symptoms:** Loss of appetite, vomiting or diarrhea

**Diagnosing & Testing**

- **Blood and urine samples:** Assess organ function and identify concurrent diseases
- **Abdominal ultrasound:** Assesses abdominal organs for evidence of MCT spread
- **Fine needle aspirates:** Used to diagnose MCT spread, especially to skin, lymph nodes, and internal organs
- **Chest radiographs:** Evaluate heart and lungs before anesthesia, and check for concurrent diseases including cancer spread
- **Tissue biopsy:** Allows microscopic evaluation of the primary MCT, providing confirmation of diagnosis and a tumor grade (low or high)
- **CT scan:** Identifies the precise location and size of MCTs for detailed surgery or radiation planning

**Treatment Options**

**Chemotherapy** is used to treat MCTs that have already spread, or have a high risk for spread. A variety of treatment protocols are available incorporating multiple drugs as well as corticosteroids.

**Palliative therapies** such as antihistamines and pain killers can help maintain quality of life but do not slow progression of the MCT.

**Prognosis for Canine MCT**

- **Localized low grade MCTs can often be cured:**
  - They are completely removed with surgery
  - They are incompletely removed with surgery but also receive conventional radiation therapy

- **MCTs that have spread to local lymph nodes can still have a good prognosis after treatment including surgery, radiation, and chemotherapy**
  - Survival times over 5 years are reported

- **High grade MCTs or MCTs that have spread to several sites have a guarded prognosis**
  - Treatment may include chemotherapy, radiation therapy, and surgery
  - Expected survival may only be a few months, even with treatment

**Stereotactic radiation (SRS/SRT)** is an advanced form of radiation therapy that is widely used in human oncology, and is now available for pets:

- **Less Invasive:** Surgery may not be needed
- **Sparcs Healthy Tissue:** Tumor is targeted through precise radiation delivery with sub-millimeter accuracy
- **Fewer Side Effects:** Less toxicity and faster recovery compared to conventional radiation therapy
- **Fewer treatments:** 1-3 treatments vs. 15-21 with conventional radiation therapy
- **PetCure Oncology’s radiation oncologists are experienced using SRS/SRT to treat dogs with MCTs**

**What to expect at your PetCure Oncology visit**

If you are referred to a PetCure Oncology hospital for treatment of your dog’s MCT, you should schedule a consultation with a board-certified radiation or medical oncologist.

**LET US GUIDE YOU THROUGH THE NEXT STEPS:**

- Schedule an initial consult with a board-certified radiation oncologist or medical oncologist by calling the number provided to you by your veterinarian.
- Just as in human medicine, confirming the cancer diagnosis comes first. If cancer is found, we will determine its type, size, location, and stage. This may involve additional testing.
- With a clear understanding of your pet’s cancer, we will present the best treatment options and help you make an informed decision.
- If you elect to move forward with treatment, your pet’s first appointment will be scheduled as soon as possible.

**IF STEREOTACTIC RADIATION (SRS/SRT) IS THE CHOSEN TREATMENT:**

- A custom-made immobilizer will be created for your dog to ensure precise positioning.
- A board-certified radiation oncologist will use data from a treatment-planning CT scan to create the best radiation treatment plan for your pet.
  - This plan will be reviewed by a second board-certified radiation oncologist.
- All treatments are delivered in 1-3 sessions.
- A follow-up appointment should be scheduled 2 weeks after radiation therapy is completed. Recommendations for additional appointments will be made at that time.

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**Note about fasting:** Since the treatment-planning CT and treatment sessions require anesthesia, your dog must be fasted prior to these appointments.

**POSSIBLE SIDE EFFECTS FROM SRS/SRT FOR MAST CELL TUMORS IN DOGS**

<table>
<thead>
<tr>
<th>Normal side effects:</th>
<th>Post treatment clinical signs that warrant a call to your vet:</th>
<th>Side effects that warrant an immediate call to your PetCure Oncology center:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss or discoloration of fur and irritated or peeling skin in the treatment field</td>
<td>Lethargy or decreased appetite</td>
<td>Difficulty breathing</td>
</tr>
<tr>
<td></td>
<td>Swelling or bruising associated with the MCT</td>
<td>Weakness or inability to stand</td>
</tr>
<tr>
<td></td>
<td>Nausea or vomiting</td>
<td>Complete refusal of food and water</td>
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</tbody>
</table>

**If in doubt about side effects, call your local PetCure Oncology center.**

*We’re here to help!*

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If you have to take your pet to the emergency room, let us know so we can coordinate with the emergency veterinarian to ensure the best possible care.

**WITH PETCURE ONCOLOGY, YOU WILL BENEFIT FROM:**

- Unrivaled Treatment and Delivery
- Industry Leading Clinical Research
- Human-Based Quality Control
- Barrier-Free Collaboration
- Proactive Education
- Five-Star Service
- Pioneering Innovation

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