

## WHAT IS A BONE MARROW TRANSPLANT?

Bone marrow is found within your bones and bone marrow stem cells are the source of all the blood cells needed for life. We can cause these stem cells to leave the bone marrow (with a medication called Neupogen) and travel out into the peripheral blood, where we can collect them using a sophisticated apheresis machine. The apheresis machine painlessly takes blood out of the patient, removes the needed stem cells, and puts all the other blood cells back into the dog.

During apheresis, the dogs are anesthetized so they don't move around for ~4-5 hours. Once cells are collected, the dogs undergo total body irradiation in an attempt to kill all the remaining cancer cells in the body. This treatment also kills all the bone marrow in the body, which is why we need to replace it with the peripheral blood stem cells we previously harvested. Once these cells are put back into the dogs with an IV catheter, the transplant is complete.

After the transplant, the dogs are hospitalized and monitored for ~2 weeks until their bone marrow is recovered and blood cell counts return to normal.. During this time, the dogs are provided with gastrointestinal medications for supportive care and antibiotics to fight infections until their bone marrow takes over. When their white blood cell count is very low, they spend 2-4 days in an isolation ward to protect them from infections from other dogs in the hospital.

Overall, patients tolerate this therapy well, although this is an aggressive therapeutic option with risks from anesthesia, radiation side effects, and infection. Cure has been obtained in 33% of B cell lymphomas and 19% of T cell lymphomas, although the dogs should be in a clinical remission before the transplant is performed. Further information is available from our Bone Marrow Transplant Unit under the direction of Dr. Steven Suter.

## GETTING STARTED

Once you have determined the best therapeutic option for your pet, you may work with our oncology team to develop an appointment plan.

**Scheduling:** Appointments for patients undergoing treatments and rechecks should be scheduled in advanced. You are responsible for making this appointment with the front desk:

- Schedule your appointments at reception upon check out
- Drop offs are requested between 7:30-8:30am
- Pick ups are requested by 4:30pm

