



The Importance of Neutering Bitches: A focus on Mammary Cancer

Mammary gland tumours are the second most common type of cancer in the female dog. The average age of a female dog when she develops mammary gland cancer is 10-12 years old, with an increased risk after the age of 6 years old.

It is estimated that 50% of all mammary cancers in dogs are benign, however even the benign masses can progress to a malignancy, so it is usually recommended that all mammary tumours should be biopsied and/or surgically removed.

There are risk factors that influence the chance of a dog developing mammary gland cancer, and a significant factor to consider is whether she is neutered. A bitch is neutered to remove her ovaries (an ovariectomy) or her ovaries and her uterus (an ovariohysterectomy); both procedures are referred to as a 'spay' or as 'neutering'.

The timing of neutering a female dog is important and needs consideration. Early removal of the ovaries plays an important 'protective' role in preventing mammary cancer, especially if the bitch is spayed before her first season. This protective effect gradually reduces with subsequent seasons until it is effectively lost by the time the bitch is 2.5 years old. Female dogs that are not neutered, or that are not neutered until later in life (after 2.5 years of age) have a higher incidence of mammary gland cancer when compared to females that are neutered before 2.5 years of age. Females that are spayed before their first season have an incidence risk of about 0.05% (a very small risk), but this risk increases to 8% if she is spayed after her first season. It then increases to a risk of 24% if she is neutered after 2 or more seasons. Despite the 'protective' effect of neutering being limited if performed in later life, there will still be a beneficial hormonal effect of spaying that will help reduce the 'flare up' of tumour cells in the mammary gland which is seen shortly after a season. If an entire bitch develops mammary cancer later in life, then it is usually recommended that she is spayed at the same time as having the tumour removed because there will still be an overall benefit with regards to the disease progression.

Other risk factors that can increase the chances of developing mammary cancer include:

- Obesity
- Hormone treatments for control of the reproduction cycle.

The surgery to perform a spay is not without risk to the female dog, and larger breed dogs present a more complicated picture of risks vs benefits of spaying at different ages. Overall, it is generally thought that the benefits outweigh the risks, but it is important to discuss these issues further with your vet before considering the surgery in your pet.