

**Dog Studies Advance Sarcoma Genetics**Shearin *et al.* \_\_\_\_\_ Page 1019

Dogs serve as attractive systems for identifying the genes associated with certain cancers, especially cancers that are difficult to study in humans but that occur frequently in certain dog breeds. For example, histiocytic sarcoma is rare in humans but occurs in 15% to 25% of Bernese Mountain Dogs. To examine the genetics of histiocytic sarcoma, Shearin and colleagues analyzed genomic DNA from Bernese Mountain Dogs, and report a cancer-associated locus spanning the *MTAP* and *CDKN2A* genes. The locus is within a region homologous to human chromosome 9p21, which has been implicated in several human cancers. This study demonstrates the power of examining distinctive malignancies in predisposed dog breeds.

**Night Shift Work and Mammographic Density**Peplonska *et al.* \_\_\_\_\_ Page 1028

Although increased breast cancer risk has been observed in night shift workers, the reasons for this are unclear. Peplonska and colleagues investigated the hypothesis that rotating night shift work is associated with disruptions in melatonin synthesis and increased mammographic density. They measured the urinary 6-sulfatoxymelatonin (MT6) levels and mammographic density in 640 night shift workers and found no significant associations between rotating night shift work exposure and mammographic density or between MT6 levels and mammographic density. The results of this study suggest that the development of breast cancer in rotating night shift workers is not mediated by increased mammographic density.

**Modeling Occult Breast Tumor Growth**Santen *et al.* \_\_\_\_\_ Page 1038

Autopsy studies reveal a reservoir of small, occult, undiagnosed breast cancers in women who have died from unrelated causes. To better understand the behavior of these occult tumors, Santen and colleagues used iterative and mathematical techniques to develop a model of occult tumor growth (OTG). The OTG model identified a 200-day effective doubling time, a 7% prevalence rate, and a 1.16-cm detection threshold. The model was validated through comparison of predicted incidence rates with those observed in population databases. The results of this study suggest that occult breast tumors are prevalent, grow slowly, and are the biologic targets of antiestrogen therapy.

**Lung Cancer Screening Practices**Doria-Rose *et al.* \_\_\_\_\_ Page 1049

Lung cancer is the leading cause of cancer mortality. Chest X-rays continue to be used as lung cancer screening tests even though low-dose computed tomography (LDCT) has been found to be more sensitive in early lung cancer detection. Doria-Rose and colleagues estimated the prevalence of chest X-ray and LDCT use in the United States based on data from the 2010 National Health Interview Survey. They report that although LDCT screening rates are low, approximately 8.7 million adults in the United States would be eligible for LDCT screening. Patient education may help ensure that lung cancer screening is used appropriately in those most likely to benefit.