Investigation into the cancer protective effect of flaxseed in Tg.NK (MMTV/c-neu) mice, a murine mammary tumor model - DTU Orbit (28/01/2019)

The aim of the present study was to investigate whether low flaxseed doses relevant to human dietary exposure can prevent mammary tumors in transgenic Tg.NK mice, a model of breast cancer. Animals were exposed to flaxseed through the diet at human relevant levels. Tumor-related parameters and tumor development were evaluated. Hepatic cytochrome P450 and glutathione S-transferase activities were significantly reduced in animals receiving low flaxseed doses. An incidence of palpable tumors before sacrifice, a number of tumors per mouse, and a number of large tumors (>6 mm diameter) at necropsy were statistically significantly lower in the high flaxseed group compared to controls, suggesting a beneficial effect on tumor progression of small dietary doses of flaxseed. However, the number of tumor-bearing mice and multiplicity of tumors at necropsy were not statistically significantly lower compared to the controls. Thus, the effect of small dietary doses of flaxseed on mammary tumor development in Tg.NK mice remains to be established.