Stony Brook Medicine
Division of Laboratory Animal Resources

7/14/16

Stony Brook Chlorine Dioxide (INtume™) Mouse Xenograft Experiments

Tumor experiments on mice were conducted for many months at Stony Brook's Division of Animal Resources (DLAR). **INtume™** Tumor Treatment solution was provided by Frontier Pharmaceutical Inc., Melville, N.Y. In these studies, we injected tumor bearing mice and showed that INtume™ Solution dissolved tumors easily. Tumors treated were human brain, breast and prostate implanted in the flanks of athymic mice. Initially INtume™ injections were made at the center of the tumor resulting in portions of the tumor still remaining, leaving ridges and overhanging tumor tissue. In these cases it was necessary to inject remaining tumor tissue 3 times or more for complete removal of larger sized tumors.

A variety of different formulations and injection techniques were tried. It became apparent that the concentration of the active ingredient as well as dose volume made a big difference in the treatment outcome. In the last series of experiments, tumors were removed and didn't recur after a single treatment. This was accomplished by injecting the tumor in multiple sites around the tumor edges. Lack of reappearance of the tumors appeared to be quite an accomplishment considering that the mice had no immune system to act on or help reduce the tumor.

We haven't seen or heard about this sort of response before. Similar experiments should be repeated with many more mice, and larger animals also, to cement the present interesting findings.

Thomas Zimmerman, DVM, MPVM, DACLAM
SBU Attending Veterinarian and DLAR Director

These photos show complete removal of the tumor in 24 hours. Mouse #422, treated on May 5, 2016.


Day 0, treatment of tumor periphery with 300µl of INtume™ 8. Human brain cells formed the tumor.

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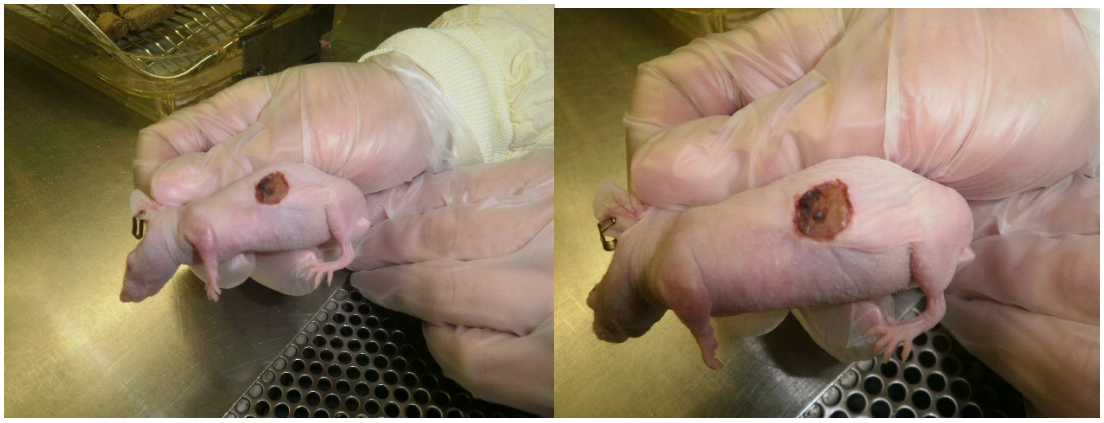
24 hours after treatment, the tumor has been completely removed leaving granulation and necrotic subcutaneous tissue.



72 hours after treatment the wound is healing

5 days after treatment the wound margins continue to contract and no evidence of remaining tumor material is seen.

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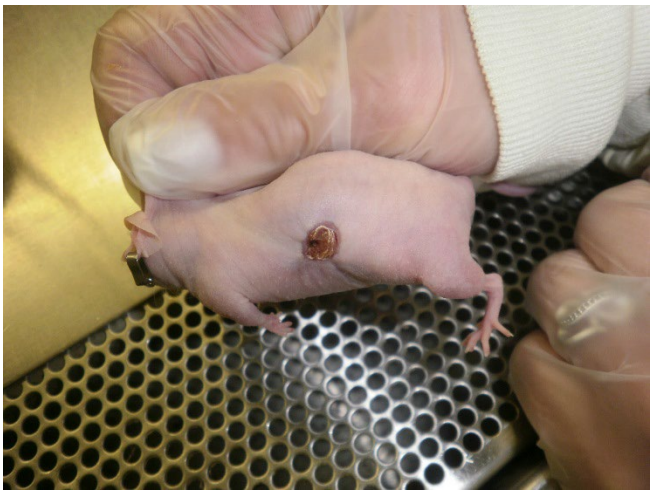
7 days after treatment



10 days after treatment

12 days after treatment

15 days after treatment

18 days after treatment

20 days after treatment

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22 days after treatment

28 days after treatment

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