# Transgenerational Effects in the Progeny of Mice Exposed to Acute High and Chronic Low Dose-rate Gamma-rays – Life Span, Cause of Death, Neoplasm Incidence –

Satoshi TANAKA, Ignacia TANAKA, Jun-ichiro KOMURA
*Department of Radiobiology*

## Abstract

To study the effects of radiation exposure on progeny, male (sires) C57BL/6J mice were irradiated with $^{137}$Cs gamma-rays at acute high dose-rate (HDR) of 770 mGy/min to a total accumulated dose of 3000 mGy, or at chronic low dose-rate (LDR) of 20 mGy/day for 150 or 300 days to total accumulated doses of 3000 mGy or 6000 mGy, respectively. After completion of irradiation, the male mice were bred to non-irradiated virgin females to produce F1 mice. All mice, except the dams, will be kept until they succumb to a natural death and will be subjected to pathological examination. The number of offspring, lifespan and neoplasm incidences will be used as parameters to evaluate the biological effects of high and low dose-rate radiation exposure. As of March 31, 2020, there was no significant difference between dose groups in the survival curves of the male parent mice and F1 (male and female) mice.

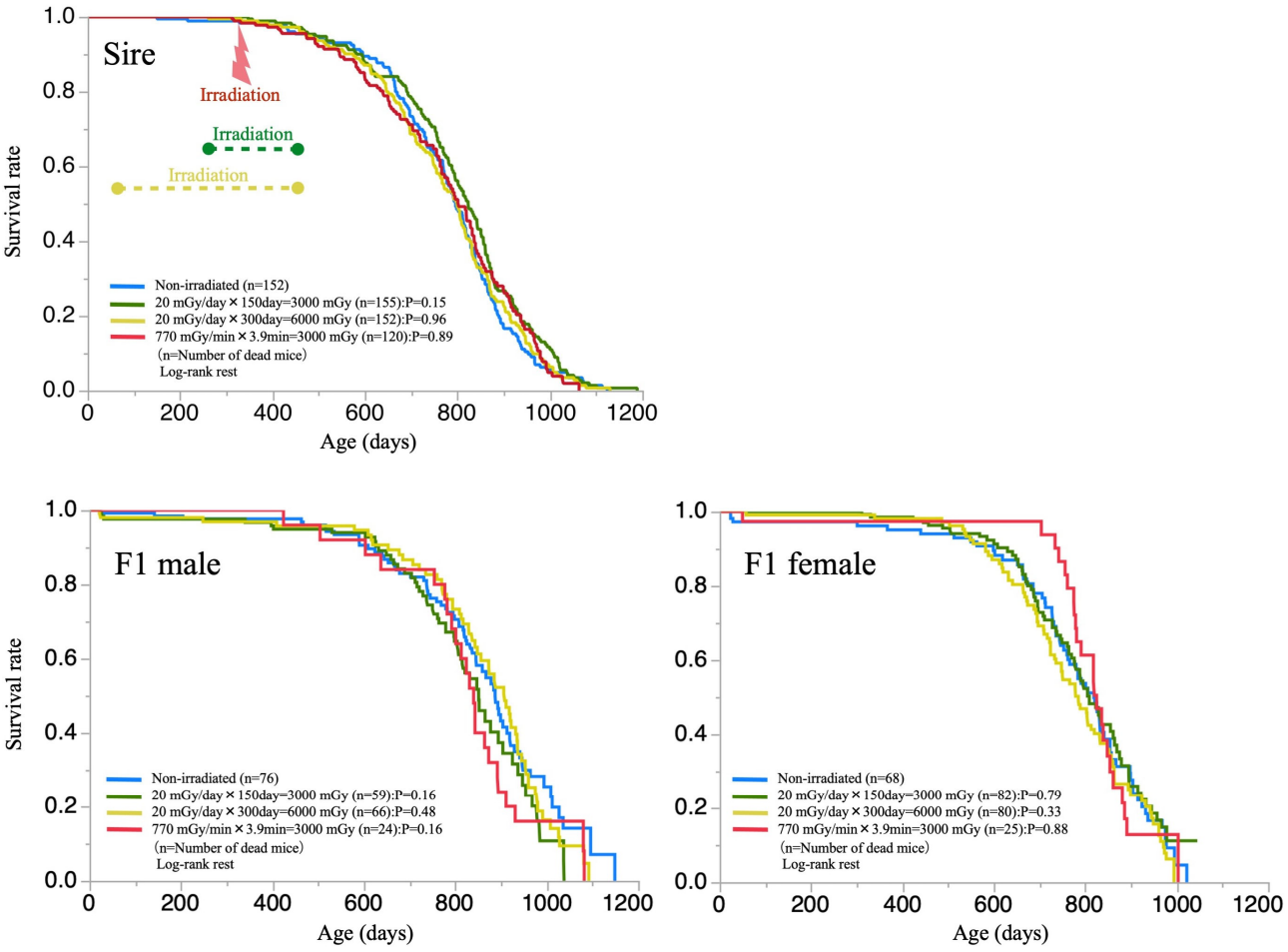


Fig. 1 Survival curves of male parent (Sire), F1 (male and female) mice as of March 31, 2020.