

Radiation
and
Pancreatic
Cancer



Genetics
and
Pancreatic
Cancer



Genetics
and Breast
and
Ovarian
Cancer



Diet,
Genetics
and
Breast
Cancer



stories inside

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insights

OPPOSITE SIDES OF THE COIN

More and more, scientists in Israel and all over the world are coming to the realization that cancer is not a single disease or even a single disease within each location in the body – such as the brain, breast, or pancreas. Rather, the more scientists learn about the genes, proteins, and molecular pathways that drive cancer, the more complicated a disease it becomes.

The ICRF sponsors the most promising projects in all areas of cancer research, and while many of our scientists appear to be investigating similar avenues, they are each actually approaching their target from differing angles.

As you read through this issue of *ICRF Insights*, you will learn about several Israeli scientists working in areas that seem closely related, but are also

very different – opposite sides of the same coin, you might say. Your continued friendship and support will help these scientists and others like them to better understand cancer’s complexities and to ultimately lead us down the path towards its cure.



RADIATION AND BRAIN TUMORS

Epidemiology is the study of factors that influence the health and illness of populations.



Dr. Siegal Sadetzki, Director of the Cancer and Radiation Epidemiology Unit at Chaim Sheba Medical Center, received an ICRF Project Grant to study the long-term health effects of ionizing radiation, with particular emphasis on the brain.

Dr. Sadetzki has found that the development of brain tumors following irradiation does not happen by chance. Rather, it may be attributed to a genetic susceptibility. She suspects that mutations in a particular gene, termed BRIP1, may be the culprit, and will attempt to better identify which mutations are most significant for radiation sensitivity.

Considering the increase in exposure to relatively-high doses of radiation due to the increasing number of diagnostic

procedures being routinely performed today (such as CT scans), particularly in children, identification of genetic markers for radiation sensitivity should have great significance for public health. Dr. Sadetzki’s findings should have practical implications for the development of radiation protection guidelines for the total population, and may suggest that some people should avoid exposure to ionizing radiation at all costs.

Dr. Sadetzki is also involved in several national and international epidemiological studies. She led the Israeli part of the international study that sought to assess the possible association between mobile phone use and cancer risk. Dr. Sadetzki and her husband, Eli, live in Shoham with their two daughters.