By Stefan Constantinescu, Science Editor

Radiation and the Best Way to Save Boobs

Standard radiation therapy in case of breast cancer may be too strong

It's a fatality stalking women. Breast cancer is the cruelest killer cancer in women and radiation therapy is one of the main weapons used against it. It is a delicate procedure: radiation must be strong enough to kill the cancer, but in the right small doses so that normal healthy tissue will not be harmed. Two new researches signaled by New Scientist show that the current medical practice uses too much radiation against breast cancer. The current standard in the treatment of early breast cancer employs 50 Grays of radiation in 25 separate "fractions" of 2 Gray doses, over five weeks.The first research, led by John Yarnold at the Institute of Cancer Research in Sutton was made on a poll of 2236 British women with early breast cancer. After the tumors were removed, the women were randomly divided in 3 categories: the first group received 39 Gray in 13 fractions; the second,41.6 Gray in 13 fractions; the last category followed the standard procedure. Treatment was 5 weeks long in all cases. 5 years later, tumor relapse was similar in the 41.6 Gray group (with doses of 3.2 Gray), as in the group following standard treatment. In the other approach, the same team assigned 2215 women into two groups: one following the standard treatment and the other going through a 3 weeks treatment of 40 Gray in 15 fractions.6 years later, the second group had manifested less adverse secondary effects and a decreased rate of tumor relapse (2.2% versus 3.3%). Some are cautious about these results. "The study needs a much longer follow up. Similar studies of head and neck tumors have found the opposite. Keeping doses low and increasing the number of fractions minimizes normal tissue damage," said Harry Bartelink, at the Netherlands Cancer Institute in Amsterdam. But the authors have found some explanations for these results. "Adenocarcinomas, such as breast and prostate cancers, may simply respond differently to radiation than squamous cell carcinomas of the head and neck," said Yarnold.