Journal of Cancer Research and Therapeutics

October-December 2007 | Volume 3 | Issue 4

CONTENTS

NANO: A paradigm shift

Nagraj G Huilgol

Division of Radiation Oncology, Nanavati Hospital, S.V. Rd, Vile Parle (West), Mumbai - 400056

For correspondence:
Dr. Nagraj G Huilgol, Dr. Balabhai Nanavati Hospital, S.V. Rd, Vile Parle (West), Mumbai - 400056, India.
E-mail: nagrajhuilgol@gmail.com

"Nano" is the name of a new car to be marketed by an Indian company. It was recently showcased both in Delhi and Detroit. It is a fuel-efficient car and is Euro IV compliant. It was designed in India for both the Indian and overseas markets. Most remarkably, it costs less than 3000 dollars. The Nano, thus, fulfills the need and aspirations of the millions who could not earlier dream of owning a car. What is the relevance of the Nano to radiation oncology?

Radiation oncology, like the automobile industry, has a range of technologies which keep changing at a rapid rate. There are cars at either end of the spectrum; similarly, in radiation oncology, the technology that starts with the workhorse telecobalt machine can end with the CyberKnife and proton accelerators.

The plethora of technologies helps individualize the physical optimization. The availability of contemporary technology has become a reason for escalating radiation doses to increase local control, and maybe survival, in some patients. Yet, this assumption has no incontrovertible biological basis. IMRT developed over a long period of time may be biologically inferior to conventional fractionation. IMRT, like coronary angioplasty and coronary bypass, has become an increasingly popular modality, but without any phase III trials as required in the practice of evidence-based medicine. Snake oil merchants are partially responsible. They have not stopped at IMRT but are pushing all kinds of image-guided radiation therapies.

Unfortunately, all this marketing and induction of untested technologies leads to escalating costs and not just escalation of dose alone. It leads to unequal distribution of healthcare, particularly in those developing countries where healthcare is predominantly in the private sector, with no social security or insurance agencies to pay for expensive treatments. The Supreme Court of India, in a recently delivered judgment, described this as a "hostile healthcare environment."

This is a clarion call for all those who are involved in the business of health. It is time to develop optimal technologies, biological modifiers, and targeted therapies to achieve increased survival and effective palliation.

"Nano" is about a paradigm shift; it is empowering those who are at the bottom of the pyramid. There is a need for a similar shift in the designing of the technology of radiation therapy. Let us hope we all contribute to it.

JCRT is now indexed in PubMed. This should ensure wider acceptability. JCRT has achieved this singular status in a very short time. Indexing has been possible with the support of contributors, reviewers, and the advertisers. The journal intends to showcase the best research and ideas to the world.

The future plans are "mega" in nature; the "Nano" paradigm is not for JCRT.