

Customising treatment for cancer patients

Is the cure for cancer already in the market? Is this deadly disease still taking its toll on the patients because they have not been given the right treatment? Are we making the best use of currently available drugs and therapies? These are questions that continually dog medical science even as the search continues for the elusive wonder drug that can cure all cancers.

In their quest for answers, Dr. Gopalakrishna Iyer and his team at the National Cancer Centre Singapore are focusing their attention on the study of head and neck cancers and Dr. Iyer is confident that their findings can also be adapted to cure other types of cancers. "While there have been significant advances in the field of cancer genetics, we have not seen a commensurate rise in the development of effective anticancer drugs. One reason is that perhaps the cure is already out there in the market, but we have not been choosing the right combination of therapies for a particular patient," said Dr. Iyer, a Singaporean medical graduate who did his postdoctoral studies in cancer genetics at Cambridge University.

While multinational pharmaceutical companies continue to develop novel drugs in their pursuit of profits, scientists in academic centres, have adopted a somewhat different approach. Through a study of patients' DNA, they hope to be able to customize anti-cancer treatment, rather than to go for a "one-size-fits-all" solution. In this regard, Dr. Iyer and his team have been steadily building up their study in collaboration with regional cancer centres, collecting data and studying results since early 2005. "When dealing with head and neck cancers, patients are either put through surgery, or a combination of chemotherapy and radiotherapy. However, at present, not every patient responds well to these treatments. Therefore, we want to know if there is a better way to prospectively determine what the best treatment is for individual patients," said Dr. Iyer. "We want to identify the signatures that predict whether tumours will respond to a specific therapeutic agent, and use this information to facilitate future treatment decisions." Once this is established, it would then be possible to customise treatment for each patient and for each type of cancer.