"Genetic testing can increase survival of cancer patients"

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Cases of lung cancer are rapidly rising in India due to rampant smoking, including active and passive smoking, genetic testing and treatment with targeted therapy drugs can significantly improve the survival rate of patients, doctors said in the run-up to the 'World No Tobacco Day'. The event was organised by the MedGenome Research and Diagnostic company and Apex Wellness Rishikesh Hospital.

Dr Vidya H Veldore, Principal Scientist Oncology with MedGenome said "Most cancers, including lung cancer arise due to genetic mutations. Once the cancer-causing genetic mutation is identified through genetic testing on the tissue biopsy, doctors can administer more effective and better targeted medicines, which are known to specifically kill the cancer cells, thus improving the clinical outcomes and preventing the side-effects of chemotherapy. There is an urgent need to create awareness about the importance of genetic testing for not only lung cancer patients but also in other cancers."

Talking about the threat to public health posed by tobacco consumption, Dr Shailesh Bondarde, Medical Oncologist, said, "India accounts for one-sixth of the 6 million tobacco-related deaths occurring around the globe every year. It is also the world's second largest tobacco consumer, where every third adult consumes some form of tobacco. The impact on public health is very high as more than 60 chemicals found in tobacco and tobacco smoke have been classified as cancer-causing agents. Tobacco-related cancer accounts for 42 percent of all male deaths due to cancer and 18.3 percent of all female deaths. Two most common cancers caused by tobacco are mouth cancer and lung cancer. Tobacco doesn't harm the individual alone. It also increases healthcare costs and decreases productivity."

Lung cancer is of two types. Non-Small Cell Lung Cancer (NSCLC) constitutes 80% of all lung cancer cases and is present in smokers and non-smokers both. Small Cell Lung Cancer (SCLC), accounting for 20% of all lung cancer cases, is found primarily in smokers. 25-40% of all NSCLC cases arise due to cancer-causing mutations in the Epidermal Growth Factor Receptor (EGFR) gene. Once the mutation is identified by genetic testing, doctors can administer drugs specifically made to target these mutations. Thus, it prevents ineffective treatment and worsening of the disease. International guidelines like National Comprehensive Cancer Network (NCCN), European Society for Medical Oncology (ESMO) and American Society of Clinical Oncology (ASCO) have made EGFR gene mutation testing mandatory in all NSCLC patients at the time of diagnosis. This helps in effective treatment planning and management.

Dr Bondarde added , "Lung cancer is now treated in a personalised way, unlike earlier when the same line of treatment was used in all cases. Now, we treat lung cancer as per histology and genetic mapping of the patient, with treatment varying from chemotherapy to tablets. Everyone consuming tobacco should get themselves screened regularly for tobacco-related cancers. Lung cancer does not show symptoms till it has reached advanced stage when it becomes difficult to treat or manage. Symptoms like persistent cough, chest pain and shortness of breath are common to other lung problems too. Because of this, diagnosis of lung cancer is often delayed, even though it can be easily detected using inexpensive screening tools such as chest X ray and sputum cytology."