## Keynote Lecture 1

# S10. The cancer prevention–therapy convergence

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The line between preinvasive disease, or intraepithelial neoplasia (IEN), and invasive neoplasia is becoming less clear with advances in our understanding of multistep and field carcinogenesis. Important commonalities between prevention and therapy research include potential prognostic/predictive markers, agents and side effects that patients would be willing to tolerate, and the logistics of definitive trials. New molecular-targeted agents and technologies (especially for screening and early detection) are allowing researchers to design clinical trials with integrated therapy and prevention endpoints. It is hoped that trials with novel convergent designs will facilitate the development of targeted drugs for both cancer prevention and advanced-cancer therapy. An example of convergent drug development in the head and neck is the ongoing phase III Erlotinib Prevention of Oral Cancer (EPOC) trial in oral IEN patients with a very high risk of oral cancer marked by certain profiles of loss of heterozygosity (LOH). Convergent aspects of this trial include the use of molecularly defined high risk to narrow the gap between oral IEN patients and cancer patients; the IEN patients in EPOC can have a history of early-stage (definitively treated) oral cancer or not; and the drug erlotinib (an epidermal growth factor receptor tyrosine kinase inhibitor) has a safety/activity profile that makes it safe enough for prevention in high risk settings and active enough for cancer therapy (e.g., it is a standard lung cancer therapy drug). The current status of convergent clinical designs or actual trials in the lung and colorectal region will be discussed. These many advances on the frontier of convergent prevention–therapy research potentially will streamline and expedite the development of targeted drugs with the potential to improve the control of major cancers.