

HPV Vaccination as a Model for Cancer Prevention

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Realization of a preventive vaccine for HPV serotypes most commonly associated with HPV-related cancers (cervical, vulvar, vaginal, anal, penile, oral cavity and oropharyngeal cancers as well as genital warts and recurrent respiratory papillomatosis) is a major advance in preventive oncology. This workshop will examine questions related to safety, efficacy, duration of protection, population impact, and next-generation vaccines. Broad areas include the following:

- **Fundamental science** that forms the foundation for development of HPV vaccines specifically, basic, translational, and clinical research that brought vaccine from discovery to approval and practice
- **Surveillance and epidemiology** to assess global distribution of HPV-related cancers; durability of protection; whether booster is needed; number of doses required for immunity; virus latency; safety; cross-protection among multiple oncogenic HPV strains; and baseline incidence of HPV infection and cervical, vulvar, vaginal, anal, penile, oral cavity and oropharyngeal cancers among vaccinated populations will be examined.
- **Populations that are high priority for vaccination**—should recommended age targets be lowered? Should high-risk populations be specified?
- Strategies for assessing population impact, including modeling, designs appropriate for answering questions about population impact, and vaccination registries
- Next-generation vaccines and improvements in HPV vaccine formulation and delivery (e.g., circumventing need for vaccine refrigeration and lowering number of doses needed) have implications for future vaccines (e.g., those in development to cover multiple high-risk oncogenic HPV types and those targeting other cancer-related infectious agents). Other considerations include trade-offs regarding number of viruses covered vs. efficacy/safety and other factors. What issues are specific to developing next-generation HPV vaccines, such as combination vaccines? What are the barriers to progress?

Workshop Chairs

- **Doug Lowy**, **MD**, Chief, Laboratory of Cellular Oncology in the Center for Cancer Research, National Cancer Institute; Deputy Director, National Cancer Institute
- **Cosette Wheeler**, **PhD**, Professor of Pathology, University of New Mexico