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