

**Invited speaker**

- Session 3. Human papillomavirus, chronic infection & associated cancers.
  - HPV infection & cancer surveys

**HPV Infection: Present and Future of Diagnostic and Prognostic Surveys****Tachezy Ruth****Department of Genetics and Microbiology, Faculty of Science Charles University**

High-risk types of Human Papillomavirus (HPV) are closely associated with various human malignancies. The ability to detect precancerous stages early significantly impacts patient outcomes, yet challenges remain in the effective diagnosis and management of HPV-related diseases. Several diagnostic techniques are employed to identify HPV infections, each varying in sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and logistical feasibility. For certain HPV-associated cancers, reliable risk assessment pipelines have been developed. Conversely, for other cancers, the precursors remain poorly defined, and management strategies are still evolving. Future research should focus on developing integrated screening strategies that utilize multiple diagnostic modalities to enhance detection rates, and on the identification of novel biomarkers that can provide insights into treatment response and disease progression. In summary, while significant progress has been made in the diagnosis and understanding of HPV-related malignancies, ongoing research is essential to refine these approaches further and improve patient care outcomes.

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