



European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry

COCIR Virtual Session  
*Thursday, March 18, 2021*

# WORKING TOGETHER AGAINST **CERVICAL CANCER**

HOW ARE THE TECHNOLOGIES AND LATEST INNOVATIONS EVOLVING BASED ON THEIR ADDED VALUE IN TACKLING CERVICAL CANCER SCREENING?\*

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\*The views and opinions expressed in this presentation are those of the author and do not necessarily reflect the opinion of Hologic Inc. or any of its affiliated companies.

# Cervical Cancer Prevention Strategies

- **Primary Prevention: Vaccination**

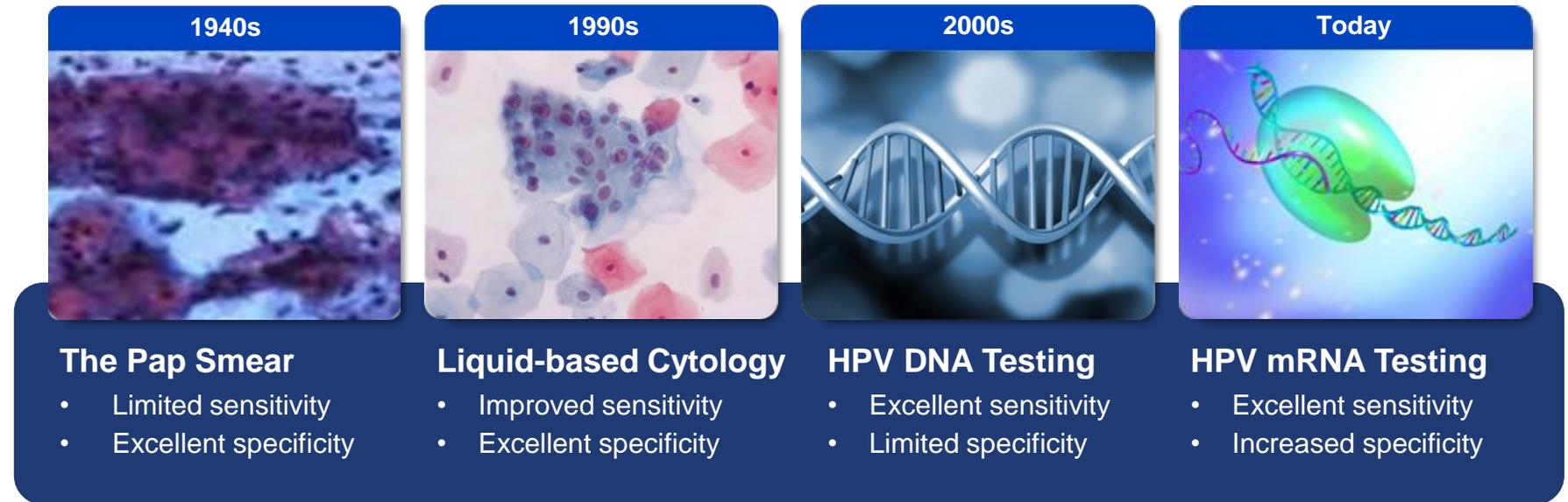
- Three prophylactic vaccines
  - GARDASIL® (MSD since 2007)  
LR-Types 6, 11 and HR-Types 16, 18
  - GARADSIL® 9 (MSD)  
LR-Types 6, 11 and HR-Types 16, 18, 31, 33, 45, 52, 58
  - Cervarix® (GSK)  
HR-Types 16, 18
- Therapeutic vaccines in development / under evaluation
  - BioNTech BNT113 (HPV16 Neck/Throat Cancer)
  - INOVIO Pharmaceuticals VGX-3100, INO-3107, MED0457 (HPV 16, 18, E6/E7)

- **Secondary Prevention: Cervical Cancer Screening Strategies**

- Cytology only
- Cytology with HPV triage
- Cytology and HPV co-testing
- Primary HPV (with cytology triage)



# Technology Evolution of Cervical Cancer Screening



# Current Cervical Cancer Screening Solutions



# Latest Innovations Cervical Cancer Screening

- **Home-collection / self-sampling for HPV screening:**
  - COVID-19 smear-test delays call for home HPV tests
    - 600.000 had failed to go ahead in the UK in April and May 2020
    - NHS England pilot trial with 31.000 women in the London area
  
- **Digital Pathology: AI guided image processing**
  - Increase sensitivity of cytology
  - Scanning of whole slide vs. few sectors
  - Power of machine learning
  
- **New predictive biomarkers and gene activation status**
  - Gene methylation associated with disease status
  - Blocking of viral gene expression in infected hosts cells
  - Activation of host viral response to acute cervical HPV infection



**Cancer: Women to trial 'do-it-at-home' kits for NHS**



**Hologic taps Google Cloud for AI-driven cervical cancer screening collaboration**



Focus on Early Detection Boosts Cervical Dysplasia Diagnostics Adoption: Fact.MR



**Thank You!**

