Indigenous HPV Test Kits for Cervical Cancer Screening

Prelims – *Current events of national and international importance.*

Mains (GS III) – *Science and Technology- developments and their applications and effects in everyday life.*

Why in news?

Indigenous HPV (Human papillomavirus) test kits for cervical cancer screening were launched recently in New Delhi.

- **Objective** – To enable affordable, accessible, and ideally mass screening for cervical cancer.
- **Developed by -** *Biotechnology Industry Research Assistance Council (BIRAC)* under Department of Biotechnology's (DBT) partnership programme Grand Challenges India (GCI).

  The Grand Challenges initiative launched by Bill & Melinda Gates Foundation drives innovation (BMGF) to tackle critical health issues in developing nations.

  In 2012, BMGF and DBT signed an MOU to launch Grand Challenges India, to foster health research and innovation.

- Developed in collaboration with *International Agency for Research on Cancer (IARC)*.

  The International Agency for Research on Cancer is an intergovernmental agency is a part of World Health Organization founded in 1965 to conduct and coordinate research on causes of cancer.

Key Features of the Test Kit

- **Focused screening** – The kits include only the *7-8 most common cancer-causing HPV types*, making the screening more focused and relevant to the Indian population.
- **RTPCR-based diagnostic** – The kits use RTPCR (Real-Time Polymerase Chain Reaction) technology, which is known for its *high sensitivity and specificity* in detecting viral genetic material.
- **Efficient and cost-effective** – The focused approach on the most relevant HPV types and the use of existing RTPCR infrastructure make these kits a cost-effective screening method.
- **Point-of-care test** –The testing is conducted close to the site of patient care where

care or treatment is provided.

Cervical Cancer in India
• Cervical cancer is a cancer that develops in the cervix, the lower part of the uterus. • **Caused by -** Human PapillomaVirus (HPV). • ***2nd most common*** cancer among Indian women. • According to WHO data, ***1 in every 5 women*** globally suffering from cervical cancer is from India, • ***25% of global cervical cancer*** deaths occurring in India often due to *late diagnosis*. • WHO recommends transitioning to HPV testing *with only two tests in a lifetime (at age 35 and 45)* to reduce the burden of screening, making it easier for women to access screening programs. • **Target** - Screen 70% of eligible women by 2030.

Reference

The Hindu| Indigenously developed HPV test kits

