

India's first HPV vaccine against cervical cancer

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In news—The Serum Institute of India (SII)'s vaccine Cervavac has recently received the Drugs Controller General of India's (DGCI) approval for market authorisation.

About the vaccine-

- **Cervavac is India's first quadrivalent human papillomavirus vaccine (qHPV) vaccine**, and intended to protect women against cervical cancer.
- **The vaccine is based on virus-like particles (VLPs)**, similar to the hepatitis B vaccine, and provides protection by generating antibodies against the HPV virus's L1 protein.
- Experts see this as a real opportunity to eliminate cervical cancer, and have expressed the hope that it **will be rolled out in national HPV vaccination strategies**.
- **HPV vaccines usually contain a protein known as L1 – present on the outer surface of the virus** that are capable of assembling into VLPs.
- These **VLPs then trick the body into thinking it is under attack by the virus**, inducing the immune system to kick into action and create antibodies.
- **The vaccine prevents infection from four strains**, which is expected to give a coverage of approximately 90 per cent against papilloma virus prevalent in the developing world.

Existing vaccines-

- **Two vaccines licensed globally are available in India – a quadrivalent vaccine (Gardasil, from Merck) and a bivalent vaccine (Cervarix, from GlaxoSmithKline)**.
- Although HPV vaccination was introduced in 2008, it has

yet to be included in the national immunisation programme.

- Previous attempts to introduce the HPV vaccine in India was marred in controversy.
- **A vaccine delivery and demonstration project led by international non-profit organisation PATH was started in 2009 in Andhra Pradesh and Gujarat but had to be suspended in 2010** as a result of public concern allegedly arising from the deaths of seven girls who received the vaccine.

What is cervical cancer?

- **Cervical cancer is a common sexually transmitted infection.** Long-lasting infection with certain types of HPV is the main cause of cervical cancer.
- HPV causes warts in various parts of the body, depending on the strain. The infection **has no cure, and the warts often go away on their own.**
- **Many people with HPV do not develop symptoms but can still infect others** through sexual contact.
- Studies show that as much as **85 per cent of cervical cancer related deaths occur in low and middle income countries** where routine gynecological screening is minimal or absent.
- There are about 14 high-risk HPV types including HPV 16, 18, 31, etc.
- **Worldwide, cervical cancer is the second most common cancer type** and the second most common cause of cancer death in women of reproductive age (15–44).
- According to the World Health Organisation's International Agency for Research on Cancer (IARC-WHO), **India accounts for about a fifth of the global burden,** with 1.23 lakh cases and around 67,000 deaths per year.
- **It is preventable, but kills one woman every eight minutes** in the country. It is preventable as long as it

is detected early and managed effectively.