Protocol for Cervical Cancer Prevention in Pakistan :

Drafted by Prof Sadiah Ahsan Pal & approved by : Academic Board SOGP(2020)

Primary Prevention : HPV Vaccination

Dosage for Bivalent Vaccine (Cervarix): (Prevents 70% of Cervical cancer)

2 dose regimen : 0 & 6 months for girls 9-14 yrs (in school or just before leaving school) (ref 6)

3 dose regimen: 0, 1 & 6 months, for girls 15 -26 yrs of age, preferably before marriage

Dosage for Quadrivalent Vaccine (Gardasil) & **Nonavalent Vaccine (prevents >90% ca Cx)**:

3 dose regimen : 0, 2 & 6 months, for girls 9-14 yrs (in school or just before leaving school)

Either of the available vaccines may be employed

Bivalent **16 18**	**Quadrivalent** **16 18 6 11**	**Nonavalent** **6 11 16 18 31 33 45 52 58**
• **9-14 yrs:** 0, 6 months • **>15 yrs** 0,1,6 months	• **9-14 yrs:** 0, 6 months • **>15 yrs** 0, 2, 6 months	• **9-14 yrs**: 0, 6 months • **>15 yrs** 0, 2, 6 months

Secondary Prevention :

*__Regular Pap Smears__ / __Liquid based cytology (LBC), HPV__ or __VIA__ screening should start after 3 to 5 yrs of marriage at 3 to 5 yearly intervals. VIA training should be mandatory

*By the age of 35 years at least one Pap Smear/LBC/ HPV Testing or VIA screening should be done

*Stop doing Pap smears at 65 years age if previous smears have been normal, and no other risk factors are present.

Lack of awareness and stigma associated with cervical cancer pose significant barriers to prevention. We need to play a greater role to create awareness amongst General Gynaecologists, Paediatricians , General physicians/ Family Physicians, women and general public.

*__HPV Vaccination__ should be added to the __EPI schedule__. Paediatricians should add HPV vaccination to the list of Vaccines to be administered on the Childs's vaccination schedule card. They should further advise those girls (and their mothers) who are not vaccinated early (age 9-14 years), that they must get vaccinated before marriage.

*__Pre-marital consultation__ with a gynaecologist or family physician is also to be promoted, so that she gets health and contraceptive advice, and HPV vaccination as well before marriage.

HPV vaccination is equally effective in *women 45-50 yrs who are HPV DNA negative at vaccination*

• HPV vaccination is equally effective in women that are *HPV seropositive at vaccination*

• Vaccinated women show *reduced recurrence rates after conization*

• Vaccination *safety is endorsed by all* international and national review boards

- Current evidence suggests that from the public health perspective the bivalent, quadrivalent and nonavalent vaccines offer comparable immunogenicity, efficacy and effectiveness for the prevention of cervical cancer, which is mainly caused by HPV types 16 and 18
- Prevalence of the HPV-associated (cervical cancer, other HPV-associated cancers, or anogenital warts)
- Price, and programmatic considerations
- HPV types 16 and 18 cause **70%** of Cervical cancer cases globally
- The nonavalent HPV vaccine (9vHPV) was licensed in 2014 and protects against the next five most common cancer-causing HPV types (HPV 31,33,45,52,58) after HPV 16,18
- Phase III clinical studies have demonstrated high vaccine efficacy **(>90%)** against cervical, vulvar, and vaginal precancers caused by these additional types, and have shown comparable immunogenicity to the shared genotypes to quadrivalent HPV vaccine (4vHPV)
- Vaccine efficacy and antibody responses for 9vHPV are found to persist for at least 5 yrs . longer-term observational studies are ongoing to monitor long-term vaccine effectiveness
- 9vHPV vaccination has the potential to prevent up to **93%** of cervical cancer cases, as well as a significant proportion of other HPV-related Anogenital cancers
- Vaccination + screening is the most effective approach to reduce the incidence of cervical cancer

- Modelling studies predict that high antibody titres could be sustained for decades & Single dose may be enough

- long-term efficacy studies are awaited

- Colposcopic guided LLETZ excision Biopsy of CIN Lesions is most appropriate for young women who wish to retain fertility

- Hysterectomy for women who do not want further children & have other co-morbids

References:

- https://www.dovepress.com/recombinant-human-papillomavirus-nonavalent-vaccine-in-the-prevention--peer-reviewed-fulltext-article-IDR
- Evidence to recommendation table on choice of vaccine. Available at http://www.who.int/entity/immunization/policy/position_papers/hpv_choice_recommendation_table.pdf, accessed May 2017