

HIGH GRADE (HGCIN) LESIONS AMONG HPV VACCINATED WOMEN

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**Background:** In clinical trials, the HPV vaccine was over 99% effective at preventing pre-cancer caused by HPV types 16 or 18 in young women, which are linked to 70% of cervical cancers. The HPV vaccine is provided free by the NHS for boys and girls aged 12- 13 in the UK. Between 2009 and 2018 more than 10 million doses of HPV vaccine were given in the UK, which means over 80% of women aged 15-24 have received the vaccination.

Cervarix, protects against two types of HPV - 16 and 18.

Gardasil, protects against four types of HPV – 6, 11, 16, and 18

Gardasil 9, protects against nine types of HPV - 6, 11, 16, 18, 31, 33, 45, 52 and 58

All HPV vaccines have been found to have high efficacy (close to 100%) for prevention of HPV vaccine type-related persistent infection, cervical intraepithelial neoplasia (CIN) 2/3, and adenocarcinoma in situ (AIS) in clinical trials

**Aim and Objective:** To evaluate CINII or worse in women referred to colposcopy clinic with moderate/severe dyskaryosis.

**Design:** Retrospective study over 24 months, time frame 1/4/22 to 31/4/24.

**Method:** All women referred to colposcopy with moderate/severe dyskaryosis were identified by Cyres, colposcopy database viewpoint as well as CSMS for immunisation, screening data and EPIC database for histology results.

**Results:**

No of high grade moderate n= 504 (9%) severe n=260 (5%) of direct referrals n=5311 and moderate 6%, severe 3% of all referrals n=8627

|                      | Vaccinated | Non Vaccinated | Total |               | Severe Dyskaryosis | Moderate Dyskaryosis |         | Severe Dyskaryosis | Moderate Dyskaryosis | Year old | Severe Dyskaryosis | Moderate Dyskaryosis |
|----------------------|------------|----------------|-------|---------------|--------------------|----------------------|---------|--------------------|----------------------|----------|--------------------|----------------------|
| Severe Dyskaryosis   | 33 (31%)   | 70 (69%)       | 103   | Cervaix       | 25                 | 112                  | 3 Doses | 24                 | 107                  | 12       | 12                 | 40                   |
|                      |            |                |       |               |                    |                      | 2 Doses | 5                  | 8                    | 13       | 5                  | 21                   |
| Moderate Dyskaryosis | 125 (48%)  | 133 (52%)      | 258   | Gardasil      | 2                  | 7                    | 1 Dose  | 1                  | 6                    | 14       | 4                  | 17                   |
|                      |            |                |       | Not sure type | 6                  | 6                    | ?       | 3                  | 4                    | 15       | 4                  | 18                   |
|                      |            |                |       |               |                    |                      |         |                    |                      | 16       | 3                  | 10                   |
|                      |            |                |       |               |                    |                      |         |                    |                      | 17       |                    | 10                   |
|                      |            |                |       |               |                    |                      |         |                    |                      | 18       | 1                  | 5                    |
|                      |            |                |       |               |                    |                      |         |                    |                      | >18      | 4                  | 4                    |
|                      |            |                |       |               |                    |                      |         |                    |                      | ?age     |                    |                      |

Among vaccinated patients referred with severe dyskaryosis >CINII n= 31 (93%)  
40% 30years or less among severe all had LLETZ  
Among vaccinated patients referred with moderate dyskaryosis >CINII n= 84  
51% <30yo  
LLETZ n= 83  
Conservative n= 42

**Conclusion:** 67% of vaccinated women had CINII or worse. Cervical screening test for 14 high risk HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 and 68. It could be 1<sup>st</sup> generation vaccines prevented HPV 16/18 associated CINII so it was due to non HPV 16/18 types or it could be HPV 16/18 associated lesions.

**Recommendations:**  
Perform multicentre audit  
Consider genotyping for risk stratification and establishing efficacy of HPV vaccination