



Prevention and Management of Human Papillomavirus Infection in Adults With HIV

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Table 1: Available Treatment Options for Anogenital Condyloma for Patients With HIV [a]

Condyloma Type	Treatment [b,c]	Comments
Anogenital condyloma	<ul style="list-style-type: none"> Cryotherapy with liquid nitrogen or cryoprobe Surgical excision TCA or BCA 80%–90% solution [d] <p>Patient self-administered treatments:</p> <ul style="list-style-type: none"> Imiquimod 3.75% or 5% cream [e] Podofilox 0.5% solution or gel [e] 	<ul style="list-style-type: none"> Use for external anogenital warts, including warts on penis, groin, scrotum, vulva, perineum, external anus, and perianus. Patients with external anal or perianal warts may also have intra-anal warts and therefore might benefit from inspection of the anal canal by digital examination or anoscopy (standard or high resolution). Imiquimod may weaken condoms and vaginal diaphragms.
Urethral meatus condyloma	<ul style="list-style-type: none"> Cryotherapy with liquid nitrogen Surgical excision 	—
Vaginal condyloma	<ul style="list-style-type: none"> Cryotherapy with liquid nitrogen Surgical excision TCA or BCA 80%–90% solution [d] 	Cryoprobe use in the vagina is not recommended because of the risk of vaginal perforation and fistula formation.
Cervical condyloma	<ul style="list-style-type: none"> Cryotherapy with liquid nitrogen Surgical excision TCA or BCA 80%–90% solution [d] 	<ul style="list-style-type: none"> Management of cervical warts should include consultation with a specialist. For patients who have exophytic cervical warts, a biopsy evaluation to exclude high-grade squamous intraepithelial lesions must be performed before treatment is initiated.
Intra-anal condyloma	<ul style="list-style-type: none"> Cryotherapy with liquid nitrogen Surgical excision TCA or BCA 80%–90% solution [d] 	Management of intra-anal warts should include consultation with a colorectal specialist.
Neovaginal condyloma [f,g]	<ul style="list-style-type: none"> Cryotherapy with liquid nitrogen or cryoprobe Surgical excision TCA or BCA 80%–90% [d] <p>Patient self-administered treatments:</p> <ul style="list-style-type: none"> Imiquimod 3.75% or 5% cream [e] Podofilox 0.5% solution or gel [e] 	Imiquimod may weaken condoms and vaginal diaphragms.

Abbreviations: BCA, bichloroacetic acid; TCA, trichloroacetic acid.

Notes:

- a. Adapted from [Workowski, et al. 2021] unless otherwise noted.
- b. Sinecatechins should not be used in any individual with HIV because safety and efficacy data do not exist [FDA 2007].
- c. Podophyllin resin is no longer recommended because of the number of safer options available.
- d. TCA or BCA can be used to treat small external warts during pregnancy but may not be as effective.
- e. Imiquimod, podophyllin, podofilox (podophyllo toxin), and sinecatechins should not be used in pregnant individuals [Briggs, et al. 2017].
- f. If the neovagina was made using sigmoid colon tissue, treatments for intra-anal condyloma should be used.
- g. [Labanca and Mañero 2017; van der Sluis, et al. 2016; Matsuki, et al. 2015; Wasef, et al. 2005; Liguori, et al. 2004; Fiumara and Di Mattia 1973]

References

- Briggs GG, Freeman RK, Yaffe SJ. Drugs in pregnancy and lactation: a reference guide to fetal and neonatal risk. Williams & Wilkins; 2017. <https://books.google.com/books?id=o3ymMgEACAAJ>
- FDA. Veregen (sinecatechins) ointment, 15%. 2007 Dec. https://www.accessdata.fda.gov/drugsatfda_docs/label/2007/021902s002lbl.pdf [accessed 2022 Oct 17]
- Fiumara NJ, Di Mattia A. Gonorrhoea and condyloma acuminata in a male transsexual. *Br J Vener Dis* 1973;49(5):478-79. [PMID: 4270635] <https://pubmed.ncbi.nlm.nih.gov/4270635>
- Labanca T, Mañero I. Vulvar condylomatosis after sex reassignment surgery in a male-to-female transsexual: complete response to imiquimod cream. *Gynecol Oncol Rep* 2017;20:75-77. [PMID: 28349118] <https://pubmed.ncbi.nlm.nih.gov/28349118>
- Liguori G, Trombetta C, Bucci S, et al. Condylomata acuminata of the neovagina in a HIV-seropositive male-to-female transsexual. *Urol Int* 2004;73(1):87-88. [PMID: 15263800] <https://pubmed.ncbi.nlm.nih.gov/15263800>
- Matsuki S, Kusatake K, Hein KZ, et al. Condylomata acuminata in the neovagina after male-to-female reassignment treated with CO2 laser and imiquimod. *Int J STD AIDS* 2015;26(7):509-11. [PMID: 24970474] <https://pubmed.ncbi.nlm.nih.gov/24970474>
- van der Sluis WB, Buncamper ME, Bouman MB, et al. Symptomatic HPV-related neovaginal lesions in transgender women: case series and review of literature. *Sex Transm Infect* 2016;92(7):499-501. [PMID: 27013740] <https://pubmed.ncbi.nlm.nih.gov/27013740>
- Wasef W, Sugunendran H, Alawattegama A. Genital warts in a transsexual. *Int J STD AIDS* 2005;16(5):388-89. [PMID: 15949073] <https://pubmed.ncbi.nlm.nih.gov/15949073>
- Workowski KA, Bachmann LH, Chan PA, et al. Sexually transmitted diseases treatment guidelines, 2021. *MMWR Recomm Rep* 2021;70(RR-4):1-187. [PMID: 26042815] <https://pubmed.ncbi.nlm.nih.gov/26042815>