

SHPVRL Key Publications

Arbyn M, Simon M, Peeters E, Meijer CJLM, Berkhof J, Cuschieri K, Bonde J, Oštrbenk Valenčak A, Zhao FH, Rezhaque R, Gultekin M, Dillner J, de Sanjosé S, Canfell K, Hillemanns P, Almonte M, Xu L, Wentzensen N, Poljak M. 2020 List of human papillomavirus assays Suitable for primary cervical cancer screening. *Clin Microbiol Infect.* 2021 May 8. pii: S1198-743X(21)00219-6. doi: 10.1016/j.cmi.2021.04.031. [Epub ahead of print] Review. PubMed [citation] PMID: 33975008

Cuschieri K, Pan J, O'Donnell M, Kirkwood K, Kavanagh K, Pollock KG, Bhatia R, Graham SV, Wakeham K. Penile cancer and the HPV attributable fraction in Scotland; A retrospective cohort study. *J Clin Virol.* 2021 Jan;134:104717. doi: 10.1016/j.jcv.2020.104717. Epub 2020 Dec 13. PubMed [citation] PMID: 33360857

Zubair F, McMahon J, Afzali P, Cuschieri K, Swee Yan Y, Schipani S, Brands M, Ansell M. Staging and treatment outcomes in oropharyngeal squamous cell carcinoma: a single-centre UK cohort. *Br J Oral Maxillofac Surg.* 2021 Jan;59(1):28-34. doi: 10.1016/j.bjoms.2020.07.007. Epub 2020 Aug 15. PubMed [citation] PMID: 32811724

Stevenson A, Wakeham K, Pan J, Kavanagh K, Millan D, Bell S, McLellan D, Graham SV, Cuschieri K. Droplet digital PCR quantification suggests that higher viral load correlates with improved survival in HPV-positive oropharyngeal tumours. *J Clin Virol.* 2020 Aug;129:104505. doi: 10.1016/j.jcv.2020.104505. Epub 2020 Jun 20. PubMed [citation] PMID: 32604039

Ejegod DM, Lagheden C, Bhatia R, Pedersen H, Boada EA, Sundström K, Cortés J, José FXB, Cuschieri K, Dillner J, Bonde J. Clinical validation of full genotyping CLART® HPV4S assay on SurePath and ThinPrep collected screening samples according to the international guidelines for human papillomavirus test requirements for cervical screening. *BMC Cancer.* 2020 May 6;20(1):396. doi: 10.1186/s12885-020-06888-0. PMID: 32375689; PMCID: PMC7203972.

Bonde J, Floore A, Ejegod D, Vink FJ, Hesselink A, van de Ven PM, Valenčak AO, Pedersen H, Doorn S, Quint WG, Petry KU, Poljak M, Stanczuk G, Cuschieri K, de Sanjosé S, Bleeker M, Berkhof J, Meijer CJLM, Heideman DAM. Methylation markers FAM19A4 and miR124-2 as triage strategy for primary human papillomavirus screen positive women: A large European multicenter study. *Int J Cancer.* 2021 Jan 15;148(2):396-405. doi: 10.1002/ijc.33320. Epub 2020 Oct 21. PMID: 32997803; PMCID: PMC7756277.

Ramírez AT, Sánchez GI, Nedjai B, Agudelo MC, Brentnall AR, Cuschieri K, Castañeda KM, Cuzick J, Lorincz AT; ASC-US-COL Trial Group. Effective methylation triage of HPV positive women with abnormal cytology in a middle-income country. *Int J Cancer.* 2021 Mar 15;148(6):1383-1393. doi: 10.1002/ijc.33314. Epub 2020 Oct 24. PMID: 33006394.

Cuschieri K, Wilson A, Palmer T, Stanczuk G, Bhatia R, Ejegod D, Bonde J. The challenges of defining sample adequacy in an era of HPV based cervical screening. *J Clin Virol.* 2021 Apr;137:104756. doi: 10.1016/j.jcv.2021.104756. Epub 2021 Feb 11. PMID: 33662921.

Poljak M, Cuschieri K, Waheed DE, Baay M, Vorsters A. Impact of the COVID-19 pandemic on human papillomavirus-based testing services to support cervical cancer screening. *Acta Dermatovenerol Alp Pannonica Adriat.* 2021 Mar;30(1):21-26. PMID: 33765753.

Bhatia R, Boada EA, Bonde J, Quint W, Christiansen IK, Xu L, Ejegod DM, Moncur S, Cuschieri K, Arbyn M. Evaluation of HarmoniaHPV test for detection of clinically significant Human Papillomavirus infection using the VALGENT framework. *J Virol Methods.* 2021 Apr 22;294:114161. doi: 10.1016/j.jviromet.2021.114161. Epub ahead of print. PMID: 33895238.

Cameron RL, Cuschieri K, Pollock KGJ. Baseline HPV prevalence in rectal swabs from men attending a sexual health clinic in Scotland: assessing the potential impact of a selective HPV vaccination programme for men who have sex with men. *Sex Transm Infect.* 2020;96(1):55-57. doi:10.1136/sextans-2018-053668

Craig SG, Anderson LA, Moran M, Graham L, Currie K, Rooney K, Robinson M, Bingham V, Cuschieri KS, McQuaid S, Schache AG, Jones TM, McCance D, Salto-Tellez M, McDade SS, James JA. Comparison of Molecular Assays for HPV Testing in Oropharyngeal Squamous Cell Carcinomas: A Population-Based Study in Northern Ireland. *Cancer Epidemiol Biomarkers Prev.* 2020;29(1):31-38. doi:10.1158/1055-9965.EPI-19-0538

Guerendiain D, Healy K, Johannessen I, Cuschieri K. Implication of human papillomavirus (HPV) infection in the paediatric population [published online ahead of print, 2019 Sep 4]. *BMJ Sex Reprod Health.* 2019;bmjsrh-2018-200175. doi:10.1136/bmjsrh-2018-200175

Guerendiain D, Moore C, Wells L, Conn B, Cuschieri K. Formalin fixed paraffin embedded (FFPE) material is amenable to HPV detection by the Xpert® HPV assay [published correction appears in *J Clin Virol.* 2016 Apr;77:116]. *J Clin Virol.* 2016;77:55-59. doi:10.1016/j.jcv.2016.02.007

Vink FJ, Meijer CJLM, Clifford GM, Poljak M, Oštrbenk A, Petry KU, Rothe B, Bonde J, Pedersen H, de Sanjosé S, Torres M, Del Pino M, Quint WGV, Cuschieri K, Boada EA, van Trommel NE, Lissenberg-Witte BI, Floore AN, Hesselink AT, Steenbergen RDM, Bleeker MCG, Heideman DAM. FAM19A4/miR124-2 methylation in invasive cervical cancer: A retrospective cross-sectional worldwide study [published online ahead of print, 2019 Aug 7]. *Int J Cancer.* 2019;10.1002/ijc.32614. doi:10.1002/ijc.32614

Aldhous MC, Bhatia R, Pollock R, Vragkos D, Cuschieri K, Cubie HA, Norman JE, Stock SJ. HPV infection and pre-term birth: a data-linkage study using Scottish Health Data. *Wellcome Open Res.* 2019;4:48. Published 2019 Mar 8. doi:10.12688/wellcomeopenres.15140.1

Bhatia R, Stewart J, Moncur S, Cubie H, Kavanagh K, Pollock KGJ, Busby-Earle C, Williams ARW, Howie S, Cuschieri K. Development of an in-house ELISA to detect anti-HPV16-L1 antibodies in serum and dried blood spots. *J Virol Methods.* 2019;264:55-60. doi:10.1016/j.jviromet.2018.10.007

Cuschieri K, Lorincz AT, Nedjai B. Human Papillomavirus Research: Where Should We Place Our Bets?. *Acta Cytol.* 2019;63(2):85-96. doi:10.1159/000493800

Palmer T, Wallace L, Pollock KG, Cuschieri K, Robertson C, Kavanagh K, Cruickshank M. Prevalence of cervical disease at age 20 after immunisation with bivalent HPV vaccine at age 12-13 in Scotland: retrospective population study. *BMJ.* 2019;365:l1161. Published 2019 Apr 3. doi:10.1136/bmj.l1161

Xu L, Benoy I, Cuschieri K, Poljak M, Bonde J, Arbyn M. Accuracy of genotyping for HPV16 and 18 to triage women with low-grade squamous intraepithelial lesions: a pooled analysis of VALGENT studies. *Expert Rev Mol Diagn.* 2019;19(6):543-551. doi:10.1080/14737159.2019.1613890

Pan J, Kavanagh K, Cuschieri K, Pollock KG, Gilbert DC, Millan D, Bell S, Graham SV, Williams ARW, Cruickshank ME, Palmer T, Wakeham K. Increased risk of HPV-associated genital cancers in men and women as a consequence of pre-invasive disease. *Int J Cancer.* 2019;145(2):427-434. doi:10.1002/ijc.32126

Cuschieri K, Schuurman R, Coughlan S. Ensuring quality in cervical screening programmes based on molecular human papillomavirus testing. *Cytopathology.* 2019;30(3):273-280. doi:10.1111/cyt.12679

Sathasivam HP, Bhatia R, Bradley P, Robson A, Paleri V, Cocks H, Oozeer N, Milne D, Sloan P, Robinson M. Concurrent HPV-related oropharyngeal carcinoma in four couples. *Oral Oncol.* 2018;86:33-37. doi:10.1016/j.oraloncology.2018.09.003

Cuschieri K, Ronco G, Lorincz A, Smith L, Ogilvie G, Mirabello L, Carozzi F, Cubie H, Wentzensen N, Snijders P, Arbyn M, Monsonego J, Franceschi S. Eurogin roadmap 2017: Triage strategies for the management of HPV-positive women in cervical screening programs. *Int J Cancer*. 2018;143(4):735-745. doi:10.1002/ijc.31261

Bonde J, Ejegod DM, Cuschieri K, Dillner J, Heideman DAM, Quint W, Pavon Ribas MA, Padalko E, Christiansen IK, Xu L, Arbyn M. The Valgent4 protocol: Robust analytical and clinical validation of 11 HPV assays with genotyping on cervical samples collected in SurePath medium. *J Clin Virol*. 2018;108:64-71. doi:10.1016/j.jcv.2018.09.012

McGrath LA, Salvi SM, Sandramouli S, Bhatt R, Cuschieri K, Mudhar HS. Squamous cell carcinoma in the anophthalmic socket: a series of four cases with HPV-16 profiling [published online ahead of print, 2018 Jun 28]. *Br J Ophthalmol*. 2018;bjophthalmol-2018-311916. doi:10.1136/bjophthalmol-2018-311916

Stevenson A, Kavanagh K, Pan J, Stevenson L, Griffin H, Doorbar J, Scott E, Deeny M, Cuschieri K, Graham SV. Risk stratification of cervical disease using detection of human papillomavirus (HPV) E4 protein and cellular MCM protein in clinical liquid based cytology samples. *J Clin Virol*. 2018;108:19-25. doi:10.1016/j.jcv.2018.08.011

Kavanagh K, Pollock KG, Cuschieri K, Palmer T, Cameron RL, Watt C, Bhatia R, Moore C, Cubie H, Cruickshank M, Robertson C (2017) Changes in the prevalence of human papillomavirus following a national bivalent human papillomavirus vaccination programme in Scotland: a 7-year cross-sectional study. *Lancet Infect Dis* Sep 28. pii: S1473-3099(17)30468-1. doi:10.1016/S1473-3099(17)30468-1.

Cuschieri, K and Bhatia R. Human Papillomavirus. Chapter in Book. Pages 21-43. Pathology of the Cervix | C. Simon Herrington | Springer [Internet]. Available from: <http://www.springer.com/gb/book/9783319512556>

Cruickshank, M.E., Pan, J., Cotton, S.C., Kavanagh, K., Robertson, C., Cuschieri, K., Cubie, H., Palmer, T., and Pollock, K.G. (2017). Reduction in colposcopy workload and associated clinical activity following human papillomavirus (HPV) catch-up vaccination programme in Scotland: an ecological study. *BJOG Int. J. Obstet. Gynaecol.*

Munro, A., Gillespie, C., Cotton, S., Busby-Earle, C., Kavanagh, K., Cuschieri, K., Cubie, H., Robertson, C., Smart, L., Pollock, K., et al. (2017). The impact of human papillomavirus type on colposcopy performance in women offered HPV immunisation in a catch-up vaccine programme: a two-centre observational study. *BJOG Int. J. Obstet. Gynaecol.*

Pattle, S.B., Utjesanovic, N., Togo, A., Wells, L., Conn, B., Monaghan, H., Junor, E., Johannessen, I., Cuschieri, K., and Talbot, S. (2017). Copy number gain of 11q13.3 genes associates with pathological stage in hypopharyngeal squamous cell carcinoma. *Genes Chromosomes Cancer* 56, 185–198.

Wakeham, K., Kavanagh, K., Cuschieri, K., Millan, D., Pollock, K.G., Bell, S., Burton, K., Reed, N.S., and Graham, S.V. (2017). HPV status and favourable outcome in vulvar squamous cancer. *Int. J. Cancer* 140, 1134–1146.

Conway, D.I., Robertson, C., Gray, H., Young, L., McDaid, L.M., Winter, A.J., Campbell, C., Pan, J., Kavanagh, K., Kean, S., Bhatia R, Cubie H, Clarkson JE, Bagg J, Pollock KG, Cuschieri K.. (2016). Human Papilloma Virus (HPV) Oral Prevalence in Scotland (HOPSCOTCH): A Feasibility Study in Dental Settings. *PloS One* 11, e0165847.

Cuschieri, K., Kavanagh, K., Moore, C., Bhatia, R., Love, J., and Pollock, K.G. (2016b). Impact of partial bivalent HPV vaccination on vaccine-type infection: a population-based analysis. *Br. J. Cancer* 114, 1261–1264.

Moore, C., Duvall, E., Braby, E., Reid, G., Docherty, E., Grieve, L., Cubie, H., Graham, C., and Cuschieri, K. (2016). Clinical sensitivity of HPV assays for the detection of high grade cervical disease in cervical samples treated with glacial acetic acid. *J. Clin. Virol. Off. Publ. Pan Am. Soc. Clin. Virol.* 79, 32–35.

Stanczuk, G., Baxter, G., Currie, H., Lawrence, J., Cuschieri, K., Wilson, A., and Arbyn, M. (2016). Clinical validation of hrHPV testing on vaginal and urine self-samples in primary cervical screening (cross-sectional results from the Papillomavirus Dumfries and Galloway-PaVDAg study). *BMJ Open* 6, e010660.

Bhatia R, Kavanagh K, Cubie HA, Serrano I, Wennington H, Hopkins M, et al. Use of HPV testing for cervical screening in vaccinated women-Insights from the SHEVa (Scottish HPV Prevalence in Vaccinated Women) study. *Int J Cancer.* 2016 Jun 15;138(12):2922–31.

Heard I, Poizot-Martin I, Potard V, Etienney I, Crenn-Hebert C, Moore C, et al. Prevalence of and Risk Factors for Anal Oncogenic Human Papillomavirus Infection among HIV-Infected Women in France in the Combination Antiretroviral Therapy Era. *J Infect Dis.* 2016 May 1;213(9):1455–61.

Guerendiain D, Moore C, Wells L, Conn B, Cuschieri K. Formalin fixed paraffin embedded (FFPE) material is amenable to HPV detection by the Xpert (R) HPV assay. *J Clin Virol Off Publ Pan Am Soc Clin Virol.* 2016 Apr;77:55–9.

Stanczuk G, Baxter G, Currie H, Lawrence J, Cuschieri K, Wilson A, Arbyn M. Clinical validation of hrHPV testing on vaginal and urine self-samples in primary cervical screening (cross-sectional results from the Papillomavirus Dumfries and Galloway-PaVDAg study). *BMJ Open.* 2016 April;6(4):e010660.

Carozzi FM, Del Mistro A, Cuschieri K, Frayle H, Sani C, Burroni E. HPV testing for primary cervical screening: Laboratory issues and evolving requirements for robust quality assurance. *J Clin Virol Off Publ Pan Am Soc Clin Virol.* 2016 Mar;76 Suppl 1:S22–8.

Moore C, Duvall E, Braby E, Reid G, Docherty E, Grieve L, Cubie H, Graham C, Cuschieri K. Clinical sensitivity of HPV assays for the detection of high grade cervical disease in cervical samples treated with glacial acetic acid. *J Clin Virol Off Publ Pan Am Soc Clin Virol.* 2016 Mar 22;79:32–5.

Arbyn M, Depuydt C, Benoy I, Bogers J, Cuschieri K, Schmitt M, Pawlita M, Geraets D, Heard I, Gheit T, Tommasino M, Poljak M, Bonde J, Quint W. VALGENT: A protocol for clinical validation of human papillomavirus assays. *J Clin Virol Off Publ Pan Am Soc Clin Virol.* 2016 Mar;76 Suppl 1:S14–21.

Palmer TJ, McFadden M, Pollock KGJ, Kavanagh K, Cuschieri K, Cruickshank M, et al. HPV immunisation and increased uptake of cervical screening in Scottish women; observational study of routinely collected national data. *Br J Cancer.* 2016 Mar 1;114(5):576–81.

Cuschieri K, Bhatia R, Cruickshank M, Hillemanns P, Arbyn M. HPV testing in the context of post-treatment follow up (test of cure). *J Clin Virol Off Publ Pan Am Soc Clin Virol.* 2016 Mar;76 Suppl 1:S56–61.

Giakoumelou S, Wheelhouse N, Cuschieri K, Entrican G, Howie SEM, Horne AW. The role of infection in miscarriage. *Hum Reprod Update.* 2016 Feb;22(1):116–33.

Leonard SM, Pereira M, Roberts S, Cuschieri K, Nuovo G, Athavale R, Young L, Ganesan R, Woodman CB.. Evidence of disrupted high-risk human papillomavirus DNA in morphologically normal cervices of older women. *Sci Rep.* 2016 Feb 15;6:20847.

Cameron RL, Kavanagh K, Pan J, Love J, Cuschieri K, Robertson C, Ahmed S, Palmer T, Pollock K.C.J. Human Papillomavirus Prevalence and Herd Immunity after Introduction of Vaccination Program, Scotland, 2009–2013. *Emerg Infect Dis.* 2016 Jan;22(1):56–64.