**Search strategy Cochrane**

| ID | Keyword | Result |
|---|---|---|
| #1 | MeSH descriptor: [Uterine Cervical Neoplasms] explode all trees | 2295 |
| #2 | (cervical cancer):ti,ab,kw | 5352 |
| #3 | (cervical neoplasm*):ti,ab,kw | 3067 |
| #4 | (cervix cancer):ti,ab,kw | 2909 |
| #5 | (cervix neoplasm*):ti,ab,kw | 1329 |
| #6 | #1 OR #2 OR #3 OR #4 OR #5 | 6866 |
| #7 | (self-sampling):ti,ab,kw | 236 |
| #8 | (selfsampling):ti,ab,kw | 228 |
| #9 | (self-collected):ti,ab,kw | 222 |
| #10 | (selfcollected):ti,ab,kw | 212 |
| #11 | #7 OR #8 OR #9 OR #10 | 410 |
| #12 | MeSH descriptor: [Mass Screening] explode all trees | 4112 |
| #13 | (screen*):ti,ab,kw | 84503 |
| #14 | (early diagno*):ti,ab,kw | 29451 |
| #15 | (early test*):ti,ab,kw | 34051 |
| #16 | (early detect*):ti,ab,kw | 14100 |
| #17 | #12 OR #13 OR #14 OR #15 OR #16 | 135008 |
| #18 | MeSH descriptor: [Alphapapillomavirus] explode all trees | 282 |
| #19 | (Human Papillomavirus):ti,ab,kw | 2390 |
| #20 | (HPV):ti,ab,kw | 3283 |
| #21 | MeSH descriptor: [Human Papillomavirus DNA Tests] explode all trees | 10 |
| #22 | (Human Papillomavirus DNA Tests):ti,ab,kw | 106 |
| #23 | #18 OR #19 OR #20 OR #21 OR #22 | 3668 |
| #24 | #11 AND #17 AND #23 | 231 |
| #25 | #6 AND #24 | 211 |
| #26 | #6 AND #24 with Cochrane Library publication date Between Jun 2012 and Jun 2022, in Cochrane Reviews | 0 |

**Search strategy Medline (via PubMed)**

| ID | Keyword | Result |
|---|---|---|
| #1 | Search: Cervical Cancer[MeSH Terms] | 81965 |
| #2 | Search: cervical cancer[Title/Abstract] | 54797 |
| #3 | Search: cervical neoplasm*[Title/Abstract] | 1202 |
| #4 | Search: cervix cancer[Title/Abstract] | 2267 |
| #5 | Search: cervix neoplasm*[Title/Abstract] | 4285 |

| | | |
|---|---|---|
| #6 | Search: ((((Cervical Cancer[MeSH Terms]) OR (cervical cancer[Title/Abstract])) OR (cervical neoplasm*[Title/Abstract])) OR (cervix cancer[Title/Abstract])) OR (cervix neoplasm*[Title/Abstract]) | 99662 |
| #7 | Search: self-sampling[Title/Abstract] | 881 |
| #8 | Search: selfsampling[Title/Abstract] | 825 |
| #9 | Search: self-collected[Title/Abstract] | 1302 |
| #10 | Search: selfcollected[Title/Abstract] | 1271 |
| #11 | Search: (((self-sampling[Title/Abstract]) OR (selfsampling[Title/Abstract])) OR (self-collected[Title/Abstract])) OR (selfcollected[Title/Abstract]) | 1990 |
| #12 | Search: Screening[MeSH Terms] | 166175 |
| #13 | Search: screen*[Title/Abstract] | 890905 |
| #14 | Search: early diagno*[Title/Abstract] | 100237 |
| #15 | Search: early test*[Title/Abstract] | 753 |
| #16 | Search: early detect*[Title/Abstract] | 75682 |
| #17 | Search: ((((Screening[MeSH Terms]) OR (screen*[Title/Abstract])) OR (early diagno*[Title/Abstract])) OR (early test*[Title/Abstract])) OR (early detect*[Title/Abstract]) | 1081495 |
| #18 | Search: Human Papillomavirus[MeSH Terms] | 9528 |
| #19 | Search: Human Papillomavirus[Title/Abstract] | 40004 |
| #20 | Search: HPV[Title/Abstract] | 48146 |
| #21 | Search: Human Papillomavirus DNA Tests[MeSH Terms] | 568 |
| #22 | Search: Human Papillomavirus DNA Tests[Title/Abstract] | 62 |
| #23 | Search: ((((Human Papillomavirus[MeSH Terms]) OR (Human Papillomavirus[Title/Abstract])) OR (HPV[Title/Abstract])) OR (Human Papillomavirus DNA Tests[MeSH Terms])) OR (Human Papillomavirus DNA Tests[Title/Abstract]) | 57319 |
| #24 | Search: (((((self-sampling[Title/Abstract]) OR (selfsampling[Title/Abstract])) OR (self-collected[Title/Abstract])) OR (selfcollected[Title/Abstract])) AND (((((Screening[MeSH Terms]) OR (screen*[Title/Abstract])) OR (early diagno*[Title/Abstract])) OR (early test*[Title/Abstract])) OR (early detect*[Title/Abstract]))) AND (((((Human Papillomavirus[MeSH Terms]) OR (Human Papillomavirus[Title/Abstract])) OR (HPV[Title/Abstract])) OR (Human Papillomavirus DNA Tests[MeSH Terms])) OR (Human Papillomavirus DNA Tests[Title/Abstract])) | 750 |
| #25 | Search: (((((Cervical Cancer[MeSH Terms]) OR (cervical cancer[Title/Abstract])) OR (cervical neoplasm*[Title/Abstract])) OR (cervix cancer[Title/Abstract])) OR (cervix neoplasm*[Title/Abstract])) AND ((((((self-sampling[Title/Abstract]) OR (selfsampling[Title/Abstract])) OR (self-collected[Title/Abstract])) OR (selfcollected[Title/Abstract])) AND (((((Screening[MeSH Terms]) OR (screen*[Title/Abstract])) OR (early diagno*[Title/Abstract])) OR (early test*[Title/Abstract])) OR (early detect*[Title/Abstract]))) AND | 692 |

| | | |
|---|---|---|
| | (((((Human Papillomavirus[MeSH Terms]) OR (Human Papillomavirus[Title/Abstract])) OR (HPV[Title/Abstract])) OR (Human Papillomavirus DNA Tests[MeSH Terms])) OR (Human Papillomavirus DNA Tests[Title/Abstract]))) | |
| #26 | Search: (((((((systematic[Title]) AND ((Review[Title/Abstract]) OR "Review" [Publication Type])))))))) | 196489 |
| #27 | Search: (((((((metaanalysis[Title/Abstract]) OR Meta-Analysis[Title/Abstract]) OR "Meta-Analysis" [Publication Type])))))) | 235534 |
| #28 | Search: (((((((systematic[Title]) AND ((Review[Title/Abstract]) OR "Review" [Publication Type])))))))) OR (((((((((metaanalysis[Title/Abstract]) OR Meta-Analysis[Title/Abstract]) OR "Meta-Analysis" [Publication Type]))))))) | 337718 |
| #29 | Search: ((((((Cervical Cancer[MeSH Terms]) OR (cervical cancer[Title/Abstract])) OR (cervical neoplasm*[Title/Abstract])) OR (cervix cancer[Title/Abstract])) OR (cervix neoplasm*[Title/Abstract])) AND ((((((self-sampling[Title/Abstract]) OR (selfsampling[Title/Abstract])) OR (self-collected[Title/Abstract])) OR (selfcollected[Title/Abstract])) AND (((((Screening[MeSH Terms]) OR (screen*[Title/Abstract])) OR (early diagno*[Title/Abstract])) OR (early test*[Title/Abstract])) OR (early detect*[Title/Abstract]))) AND (((((Human Papillomavirus[MeSH Terms]) OR (Human Papillomavirus[Title/Abstract])) OR (HPV[Title/Abstract])) OR (Human Papillomavirus DNA Tests[MeSH Terms])) OR (Human Papillomavirus DNA Tests[Title/Abstract])))) AND (((((((((systematic[Title]) AND ((Review[Title/Abstract]) OR "Review" [Publication Type])))))))) OR (((((((((metaanalysis[Title/Abstract]) OR Meta-Analysis[Title/Abstract]) OR "Meta-Analysis" [Publication Type])))))))) | 28 |
| #30 | Search: ((((((Cervical Cancer[MeSH Terms]) OR (cervical cancer[Title/Abstract])) OR (cervical neoplasm*[Title/Abstract])) OR (cervix cancer[Title/Abstract])) OR (cervix neoplasm*[Title/Abstract])) AND ((((((self-sampling[Title/Abstract]) OR (selfsampling[Title/Abstract])) OR (self-collected[Title/Abstract])) OR (selfcollected[Title/Abstract])) AND (((((Screening[MeSH Terms]) OR (screen*[Title/Abstract])) OR (early diagno*[Title/Abstract])) OR (early test*[Title/Abstract])) OR (early detect*[Title/Abstract]))) AND (((((Human Papillomavirus[MeSH Terms]) OR (Human Papillomavirus[Title/Abstract])) OR (HPV[Title/Abstract])) OR (Human Papillomavirus DNA Tests[MeSH Terms])) OR (Human Papillomavirus DNA Tests[Title/Abstract])))) AND (((((((((systematic[Title]) AND ((Review[Title/Abstract]) OR "Review" [Publication Type])))))))) OR (((((((((metaanalysis[Title/Abstract]) OR Meta-Analysis[Title/Abstract]) OR "Meta-Analysis" [Publication Type])))))))) Filters: in the last 10 years | 25 |

**Search strategy Embase (via Ovid)**

| ID | Keyword | Result |
|---|---|---|
| 1 | exp uterine cervix cancer/ | 102948 |
| 2 | cervical cancer.ab,kw,ti. | 73669 |
| 3 | "cervical neoplasm*".ab,kw,ti. | 835 |
| 4 | cervix cancer.ab,kw,ti. | 3064 |
| 5 | "cervix neoplasm*".ab,kw,ti. | 771 |
| 6 | 1 or 2 or 3 or 4 or 5 | 120009 |
| 7 | self-sampling.ab,kw,ti. | 1124 |
| 8 | selfsampling.ab,kw,ti. | 61 |
| 9 | self-collected.ab,kw,ti. | 1704 |
| 10 | selfcollected.ab,kw,ti. | 60 |
| 11 | 7 or 8 or 9 or 10 | 2636 |
| 12 | exp screening/ | 699331 |
| 13 | "screen*".ab,kw,ti. | 1194814 |
| 14 | "early diagno*".ab,kw,ti. | 132660 |
| 15 | "early test*".ab,kw,ti. | 943 |
| 16 | "early detect*".ab,kw,ti. | 105068 |
| 17 | 12 or 13 or 14 or 15 or 16 | 1644420 |
| 18 | exp Wart virus/ | 40097 |
| 19 | Human Papillomavirus.ab,kw,ti. | 47183 |
| 20 | HPV.ab,kw,ti. | 65017 |
| 21 | exp Human papillomavirus DNA test/ | 2420 |
| 22 | Human Papillomavirus DNA Tests.ab,kw,ti. | 81 |
| 23 | 18 or 19 or 20 or 21 or 22 | 82723 |
| 24 | 6 and 11 and 17 and 23 | 833 |
| 25 | limit 24 to ((consensus development or meta analysis or "systematic review") and last 10 years) | 35 |

**List of studies included and excluded after full-text analysis**

| Lp. | Authors, Title, Journal | Full text status |
|---|---|---|
| 1 | Malone, C.; Barnabas, R.V.; Buist, D.S.M.; Tiro, J.A.; Winer, R.L. Cost-effectiveness studies of HPV self-sampling: A systematic review. Prev Med. 2020, 132, 105953. | Included |
| 2 | Arbyn, M.; Smith, S.B.; Temin, S.; Sultana, F.; Castle, P.; Collaboration on Self-Sampling and HPV Testing. Detecting cervical precancer and reaching underscreened women by using HPV testing on self samples: updated meta-analyses. BMJ 2018, 363, k4823. | Included |
| 3 | Musa, J.; Achenbach, C.J.; O'Dwyer, L.C.; Evans, C.T.; McHugh, M.; Hou, L.; Simon, M.A.; Murphy, R.L.; Jordan, N. Effect of cervical cancer education and provider recommendation for screening on screening rates: A systematic review and meta-analysis. PLoS One 2017, 12(9), e0183924. | Included |
| 4 | Nelson, E.J.; Maynard, B.R.; Loux, T.; Fatla, J.; Gordon, R.; Arnold, L.D. The acceptability of self-sampled screening for HPV DNA: a systematic review and meta-analysis. Sex. Transm. Infect. 2017, 93(1), 56-61. | Included |
| 5 | Verdoodt, F.; Jentschke, M.; Hillemanns, P.; Racey, C.S.; Snijders, P.J.; Arbyn, M. Reaching women who do not participate in the regular cervical cancer screening programme by offering self-sampling kits: a systematic review and meta-analysis of randomised trials. Eur. J. Cancer 2015, 51(16), 2375-85. | Included |
| 6 | Albrow, R.; Blomberg, K.; Kitchener, H.; Brabin, L.; Patnick, J.; Tishelman, C.; Törnberg, S.; Sparén, P.; Widmark, C. Interventions to improve cervical cancer screening uptake amongst young women: a systematic review. Acta Oncol. 2014, 53(4), 445-51. DOI: 10.3109/0284186X.2013.869618; PMID: 24660768. | Included |
| 7 | Arbyn. M.; Verdoodt, F.; Snijders, P.J.; Verhoef, V.M.; Suonio, E.; Dillner, L.; Minozzi, S.; Bellisario, C.; Banzi, R.; Zhao, F.H.; et al. Accuracy of human papillomavirus testing on self-collected versus clinician-collected samples: a meta-analysis. Lancet Oncol. 2014, 15(2), 172-83. DOI: 10.1016/S1470-2045(13)70570-9; PMID: 24433684. | Included |
| 8 | Morgan, K.; Azzani, M.; Khaing, S.L.; Wong, Y.L.; Su, T.T. Acceptability of Women Self-Sampling versus Clinician-Collected Samples for HPV DNA Testing: A Systematic Review. J. Low. Genit. Tract. Dis. 2019, 23(3), 193-199. | Included |
| 9 | Mezei, A.K.; Armstrong, H.L.; Pedersen, H.N.; Campos, N.G.; Mitchell, S.M.; Sekikubo, M.; Byamugisha, J.K.; Kim, J.J.; Bryan, S.; Ogilvie, G.S. Cost-effectiveness of cervical cancer screening methods in low- and middle-income countries: A systematic review. Int. J. Cancer 2017, 141(3), 437-446. | Included |
| 10 | Arbyn M., Castle P. E., Schiffman M. et al. (2022). Meta-analysis of agreement/concordance statistics in studies comparing self- vs | Included |

| | | |
|---|---|---|
| | **clinician-collected samples for HPV testing in cervical cancer screening. Int. J. Cancer. 151(2): 308-312** | |
| **11** | **Kelly, H.; Mayaud, P.; Segondy, M.; Pant Pai, N.; Peeling, R.W. A systematic review and meta-analysis of studies evaluating the performance of point-of-care tests for human papillomavirus screening. Sex. Transm. Infect. 2017, 93(S4), S36-S45.** | **Included** |
| **12** | **Zhao, F.H.; Lewkowitz, A.K.; Chen, F.; Lin, M.J.; Hu, S.Y.; Zhang, X.; Pan, Q.J.; Ma, J.F.; Niyazi, M.; Li, C.Q.; et al. Pooled analysis of a self-sampling HPV DNA Test as a cervical cancer primary screening method. J. Natl. Cancer Inst. 2012, 104(3), 178-88.** | **Included** |
| **13** | **Racey, C.S.; Withrow, D.R.; Gesink, D. Self-collected HPV testing improves participation in cervical cancer screening: a systematic review and meta-analysis. Can. J. Public Health 2013, 104(2), e159-66.** | **Included** |
| **14** | **Yeh, P.T.; Kennedy, C.E.; De Vuyst, H.; Narasimhan, M. Self-sampling for human papillomavirus (HPV) testing: A systematic review and meta-Analysis. BMJ Glob. Health 2019, 4, e001351.** | **Included** |
| **15** | **Tesfahunei, H.A.; Ghebreyesus, M.S.; Assefa, D.G.; Zeleke, E.D.; Acam, J.; Joseph, M.; Getachew, E.; Kajogoo, V.D.; Bekele, D.; Manyazewal, T. Human papillomavirus self-sampling versus standard clinician-sampling for cervical cancer screening in sub-Saharan Africa: a systematic review and meta-analysis of randomized controlled trials. Infect. Agent. Cancer. 2021, 16(1): 43.** | **Included** |
| 16 | Tsiachristas A., Gittins M., Kitchener H. et al. (2018). Cost-effectiveness of strategies to increase cervical screening uptake at first invitation (STRATEGIC). J. Med. Screen. 25(2): 99-109 | Excluded |
| 17 | Caleia A. I., Piresa C., de Fátima Pereira J. et al. (2020). Self-Sampling as a Plausible Alternative to Screen Cervical Cancer Precursor Lesions in a Population with Low Adherence to Screening: A Systematic Review. Acta Cytol. 64(4): 332-343 | Excluded |
| 18 | Nodjikouambaye Z. A., Adawaye C., Bouassa R. S. et al. (2020). A systematic review of self- sampling for HPV testing in Africa. Int. J. Gynaecol. Obstet. 149(2): 123-129 | Excluded |
| 19 | Marjolein Dieleman M., de Waard J., Bea G. et al. (2022). Preferences and Experiences Regarding the Use of the Self-Sampling Device in hrHPV Screening for Cervical Cancer. Patient. 15(2): 245-253 | Excluded |
| 20 | Amir S. M., Idris I. B., Yusoff H. M. (2022). The Acceptance of Human Papillomavirus Self-Sampling Test among Muslim Women: A Systematic Review. Asian Pac. J. Cancer Prev. 23(3): 767-774 | Excluded |
| 21 | Serrano B., Ibáñez R., Robles C. et al. (2022). Worldwide use of HPV self-sampling for cervical cancer screening. Prevent. Med. Volume 154, 106900 | Excluded |
| 22 | Dzobo M., Dzinamaria T., Kgarosi K. et al. (2022). Human papillomavirus self-sampling for cervical cancer screening among women in sub-Saharan Africa: a scoping review protocol. BMJ Open. 12: e056140 | Excluded |

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|---|---|---|
| 23 | Nagendiram A., Bougher H., Banks J. et al. (2019). Australian women's self-perceived barriers to participation in cervical cancer screening: A systematic review. Health. Promot. J. Austr. 31(3): 343-353 | Excluded |
| 24 | Nishimura H., Yeh P. T., Oguntade H. et al. (2021). HPV self-sampling for cervical cancer screening: a systematic review of values and preferences. BMJ Global Health. 6: e003743 | Excluded |
| 25 | Rossi P. G., Baldacchini F., Ronco G. (2014). The possible effects on socio-economic inequalities of introducing HPV testing as primary test in cervical cancer screening programs. Front. Oncol. 4: 20 | Excluded |
| 26 | Zheng R., Heller D. S. (2020). High-Risk Human Papillomavirus Identification in Precancerous Cervical Intraepithelial Lesions. J. Low. Genit. Tract. Dis. 24(2): 197-201 | Excluded |

**AMSTAR2**

The systematic reviews included in the analysis received the following ratings:

- high – Musa 2017, Arbyn 2014;
- low – Arbyn 2018, Camilloni 2013;
- critically low – Arbyn 2022, Tesfahunei 2021, Malone 2020, Morgan 2019, Yeh 2019, Kelly 2017, Mezei 2017, Nelson 2017, Verdoodt 2015, Albrow 2014, Racey 2013, Zhao 2012.

| Publication | Item 2 | Item 4 | Item 7 | Item 9 | Item 11 | Item 13 | Item 15 | Overall rating |
|---|---|---|---|---|---|---|---|---|
| Arbyn 2022 (MA) | Partial Yes | Partial Yes | No | No | Yes | No | No | **Critically Low** |
| Tesfahunei 2021 (MA) | Yes | Partial Yes | No | Yes | Yes | Yes | No | **Critically Low** |
| Malone 2020 (SR) | Partial Yes | Partial Yes | No | No | – | No | – | **Critically Low** |
| Morgan 2019 (SR) | No | Partial Yes | No | Partial Yes | – | No | – | **Critically Low** |
| Yeh 2019 (MA) | Yes | Yes | No | Yes | Yes | Yes | No | **Critically Low** |
| Arbyn 2018 (MA) | Partial Yes | Partial Yes | No | Yes | Yes | Yes | Yes | **Low** |
| Kelly 2017 (MA) | Partial Yes | Partial Yes | No | Partial Yes | Yes | Yes | No | **Critically Low** |
| Mezei 2017 (SR) | No | Yes | No | No | – | No | – | **Critically Low** |
| Musa 2017 (MA) | Yes | Yes | Yes | Yes | Yes | Yes | Yes | **High** |
| Nelson 2017 (MA) | Yes | Yes | Partial Yes | No | Yes | No | No | **Critically Low** |

| Publication | Item 2 | Item 4 | Item 7 | Item 9 | Item 11 | Item 13 | Item 15 | Overall rating |
|---|---|---|---|---|---|---|---|---|
| Verdoodt 2015 (MA) | Partial Yes | Partial Yes | No | Yes | Yes | Yes | No | **Critically Low** |
| Albrow 2014 (SR) | No | Partial Yes | No | No | – | No | – | **Critically Low** |
| Arbyn 2014 (MA) | Partial Yes | Partial Yes | Yes | Yes | Yes | Yes | Yes | **High** |
| Camilloni 2013 (MA) | Partial Yes | Partial Yes | Yes | Yes | Yes | Yes | No | **Low** |
| Racey 2013 (MA) | No | Partial Yes | No | No | Yes | No | No | **Critically Low** |
| Zhao 2012 (MA) | No | No | No | No | No | No | No | **Critically Low** |

MA – meta-analysis; SR – systematic review

*Critical domains: item 2 – protocol registered before commencement of the review; item 4 – adequacy of the literaturę search; item 7 – justyfication for excluding individual studies; item 9 – risk of bias from individual studies being included in the review; item 11 – appropriateness of meta-analytical methods; item 13 – consideration of risk of bias when interpreting the results of the review; item 15 – assessment of presence and likely impact of publication bias.*