

# Glossary

Atypical squamous cell	Cells that are considered suggestive but not diagnostic of a squamous intraepithelial lesion, at cytology.
Background cervical cancer incidence rate	The cervical cancer incidence rate expected in the absence of screening. It is not directly observable but estimated from the incidence in the target population before screening started (and adjusted for trend) or incidence at about the same time in an unscreened referent population, or in unscreened controls in the case of a randomized trial.
Biopsy	Tissue specimen for morphological or immunohistochemical diagnosis
Cancer registry	System of ongoing reporting of cancer patients in a defined population. More broadly a research institute that utilizes a cancer register and other information for epidemiological research.
Cervical cancer incidence rate	The rate at which new cases of cervical cancer occur in a population. The numerator is the number of newly diagnosed cases of cervical cancer that occur in a defined period. The denominator is the population at risk of a diagnosis of cervical cancer during this defined period multiplied by the length of this period, sometimes expressed as person-time.
Cervical cancer mortality rate	The rate at which deaths from cervical cancer occur in a population. The numerator is the number of cervical cancer deaths that occur in a defined time period. The denominator is the population at risk of dying from cervical cancer during this defined period multiplied by the length of the period, sometimes expressed as person-time.
Cervical cancer register	Recording of information on all new cases of and deaths from cervical cancer occurring in a defined population.
Cervicography	Photography of the cervix taken after the application of 5% acetic acid, using a camera with a fixed focal length and internal light source. The images are projected on a screen at a fixed distance to simulate magnification and are interpreted as to grade of neoplasia by a specially trained evaluator.
Cohort effect	Effect of an etiological exposure or medical or societal intervention that affects differently persons born in successive birth cohorts.
Colposcopy	Magnified visual examination of the cervix using a low-power stereoscopic binocular field microscope with a powerful light source.

Cost-effectiveness	An analysis of the costs relative to the effectiveness of a procedure or activity, or comparisons of similar activities to determine the relative degree they will achieve similar effectiveness.
Coverage	Number of women invited as a proportion of target population. Also the number of women who have a screening test within the recommended interval as a proportion of all women who are eligible to attend for screening. In the second meaning, this term is equivalent to attendance or participation rate.
Delay time	The time between when a lesion destined to become cancer could be detected by screening and when it is actually detected by screening. Not directly observable. Cf. lead time
Demonstration project	A health-care project with built-in provision for measuring cost, performance and outcome of a model service.
Detectable preclinical phase (DPCP)	The time between that at which a tumour could be found by screening and that at which it would become clinically recognized (not directly observable). Length of DPCP is sojourn time and it is composed of delay time and lead time.
Detection method for sensitivity	To estimate sensitivity by detection rate and interval cancer incidence.
Detection rate	Proportion of cancers (preinvasive lesions) confirmed during the screening episode among those screened or in the target population.
Direct-to-vial	Where liquid-based cytology is used and cells exfoliated from the cervix are placed directly and completely in the vial of preservative liquid.
Down-staging	Screening with identification of invasive disease in asymptomatic women at an earlier clinical stage than those detected clinically.
Effect	The result of screening. Effect measures are changes in incidence of and/or mortality from cervical cancer.
Effectiveness	The reduction in incidence of and/or mortality from invasive cervical cancer due to screening practice, under real conditions and among those in the target population.
Efficacy	The reduction in incidence of and/or mortality from invasive cervical cancer under ideal conditions (in randomized trials), and among those screened compared to the incidence or mortality in those randomized not to be screened but compliant if invited to be screened.
Efficiency	The effects or end results achieved in relation to the effort expended in terms of money, resources and time.
Episode	The period from the time of test (taking the smear) to the end of time of further assessment, i.e., the time of decision to intervene or not.

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False (change) gain in sensitivity	When a second, adjunct test is added to a conventional, primary test and positive results by the second test are used to supplement the positivity of the primary test, the estimate of sensitivity will always be greater than that of the first test used alone, even if the second test were totally random with respect to the disease or to the first test. The increased combined sensitivity may or may not be greater than that contributed by an unrelated adjunct test in the same screening setting. Ideally, studies should consider sensitivity gains of combined testing only after taking into account this chance increase in sensitivity.
Further assessment	Additional diagnostic steps (either non-invasive or invasive) performed to clarify the nature of an abnormality detected by the screening test, either at the time of screening or on recall or as a result of referral.
Gold standard	A diagnostic method that is considered to have the best sensitivity and specificity among all methods available.
Incidence method for sensitivity	To estimate sensitivity as $1 - \text{ratio of interval cancer incidence rate between two screens to that expected if there was no screening.}$
Incidence (annual) of preinvasive lesions	Detection rate of the lesion at given subsequent screen divided by the screening interval. Alternatively, the number of new cases of preinvasive lesions divided by the person time, which equals number of women screened multiplied by screening interval.
Informed choice	Decision about whether or not to participate, based on the provision of information about the benefits and limitations of screening.
Informed consent	Voluntary consent given by a subject for participation, after being informed about the purpose, procedures, benefits and risks.
Infrastructure	Material and human resources and their interrelationships.
Interval cancer	An invasive cervical cancer diagnosed in an attendee, after a negative screen, either: <ul style="list-style-type: none"> <li>• before the next invitation to screening was due or</li> <li>• within a period equal to a screening interval for a woman who has reached the upper age limit for screening.</li> </ul>
Interval cancer (incidence) rate	Interval cancers divided by person years in the period the cancers are derived from. The rate is different for test, episode and programme.
Lead time	Period between when a lesion destined to become cancer is found by screening and when it would have been clinically recognized if no screening took place (cf. delay time).
Length bias	The bias towards detection by screening of cancers with longer sojourn times and therefore better prognosis.

Loop electrosurgical excision procedure (LEEP)	LEEP uses a thin wire loop electrode attached to an electrosurgical generator as a precise and rapid surgical tool. The generator transmits a painless electrical current that quickly cuts away affected cervical tissue in the immediate area of the loop wire.
Microinvasive cancer	Cancers that have invaded no more than 5 mm deep and 7 mm wide into the underlying cervical stroma.
Organized screening	Screening programmes organized at national or regional level, with an explicit policy, that includes several essential elements from target population to treatment.
Opportunistic screening	Screening outside an organized or population-based screening programme, as a result of, for example, a recommendation made during a routine medical consultation for the woman, consultation for an unrelated condition, on the basis of a possibly increased risk for developing cervical cancer or by self-referral.
Outcome	Event related to objective of screening (death from cervical cancer), sometimes also to the performance of screening.
Overcall	Recall or referral with poor specificity
Overdiagnosis	Detection of cervical cancers or preinvasive lesions that would never have progressed to be clinically recognized during a woman's life.
Overtreatment	Treatment of lesions that would never have progressed to be clinically recognized during a woman's life.
Participation rate	Proportion of those screened among those invited according to the scheduled policy (organized screening). In a programme not based on invitations, participation has the same meaning as coverage.
Performance	Quality of screening activities mainly related to the laboratory, sometimes to all the screening process rather than outcome.
Performance indicators	Quantitative measures of the process of screening. Generally, targets are set of the quantity which is required for good quality process.
Period effect	Effect of an etiological exposure or medical or societal intervention that affects differently in time.
Pilot study	A demonstration project that provides information on performance but not on outcome and is based on a limited population.
Population access	Proportion of the national population of eligible women who have access to a screening programme (cf. coverage).
Positive predictive value	Proportion of diagnoses of cancer in all positive results of the screening test. A process measure
Positivity rate of test	Proportion of diagnoses of cancer in all positive results of the screening test. A process measure.

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Primary screening	Detection of cases of cervical cancer or of its precursor lesions among asymptomatic women without a referral diagnosis, i.e., as true population screening, either opportunistic or systematic.
Quality assurance	Maintenance of minimum standards and continual striving for excellence.
Quality control	The supervision and control of all operations involved in a process, usually involving sampling and inspection, in order to detect and correct systematic or excessively random variations in quality.
Recall	Clarification of a perceived abnormality detected at screening, by performance of an additional procedure.
Recall rate	The number of women recalled for further assessment as a proportion of all women who were screened (test positivity rate).
Referral	Physical referral of women to a clinical facility as a consequence of the screening test for diagnostic confirmation, e.g., by histology.
Reflex HPV testing	A protocol for routine triage of equivocal cervical cytological interpretations, by HPV testing either the residual liquid cytology specimen or an additional specimen collected at the same time as the original sample.
Relative sensitivity	Ratio of detection rate of malignancy after test A to the detection rate of malignancy after test B. Also sensitivity of test A relative to histology. See verification bias.
Relative survival	Survival if cervical cancer were the only cause of death among cervical cancer patients.
Screen and treat	A procedure where testing, confirmation and treatment take place during the same episode.
Screening interval	Fixed interval between routine screenings decided upon in each programme, depending on screening policy.
Screening policy	Specific policy of a screening programme which dictates the targeted age group, the geographical area, the screening interval, etc. Opportunistic systems may also have policies.
Screening test	Test applied to all women in a programme that results in discrimination between those who test positive from those who test negative (e.g., Pap smear). Those who test positive will be recalled or referred for further assessment or diagnostic confirmation.
See and treat	A procedure where the cervix is treated at first attendance for colposcopy and no histology information is available.

Sensitivity	<p>Capacity of screening to identify unrecognized disease, i.e., future invasive cervix cancer in a population or disease in the DPCP.</p> <ul style="list-style-type: none"><li>• sensitivity of test is the proportion of those with a positive test among those with disease in the DPCP</li><li>• sensitivity of the episode is the proportion of those with disease detected by screening among those with the disease in the DPCP among those screened</li><li>• programme sensitivity is the proportion of those with disease detected by the screening organization among those with disease in the DPCP among total target population</li><li>• sensitivity by incidence method is estimated with interval cancers and background incidence</li></ul>
Sojourn time	<p>Detectable preclinical phase; time between that at which a tumour could be found by screening and that at which it would be clinically recognized if the woman was not screened (not directly observable).</p>
Specificity	<p>Capacity of screening to identify those who remain healthy in a population.</p>
Split sample	<p>Sample of the exfoliated cervical cells where liquid-based cytology sample is split between preparation of a conventional Pap smear and the balance of cells being deposited in a vial of liquid preservative.</p>
Target population	<p>The population eligible for screening, i.e., all women recommended to undergo screening according to the policy adopted.</p>
Triage	<p>Detection of cases of cervical cancer or of its precursor lesions among women who were initially found to have an abnormal screening test that requires further evaluation.</p>
Undercall	<p>Recall or referral with poor sensitivity</p>
Verification bias	<p>A bias in the relative sensitivity and specificity estimates that occurs if the probability of disease verification via the gold standard (e.g., colposcopy and biopsy) is dependent on the screening test result. It may also occur when there are two screening tests whose results the investigator uses to decide who will be referred for the gold standard. In that case, bias will ensue if the positivity of the second test is evaluated conditionally on the positivity of the first test.</p>