Appendix

A. Description of the three Dutch national cancer screening programmes

Cervical cancer screening programme

The cervical CSP was nationally implemented in 1979 and currently invites women aged between 30-60 years to participate at 5-year intervals.[1, 2] Over the past few years several adjustments have been made to the design of this CSP.[3] In 2016 the invitation strategy was altered; whereas potential participants used to be invited by their own GP or by the local screening organization, nowadays this is the exclusive responsibility of the local screening organization. In 2017 adjustments were made regarding the testing procedure and the time interval of the cervical CSP. First, instead of performing a classical Papanicolaou (Pap) smear for cytological abnormalities at the GP's office, a new test for high-risk human papilloma virus (hrHPV) was added prior to investigation of aberrant cells. Several studies have shown that adding a HPV test is both more sensitive and specific in the detection of cervical cancer than cytology alone.[4-6] A second modification was the introduction of the self-sampling test for hrHPV. Before 2017 all women who wanted to participate had to see their GP for a smear, whereas they can now choose to use the self-sampling test instead. However, if this test gives a positive result, they still need to see their GP in order to have a smear that can be checked for cytological abnormalities. The outcome of the hrHPV test is sent by letter by the local screening organization. In case of a positive cytological result, hospital referral will be handled via the GP. A final change, also implemented in 2017, is an adjustment to the length of the interval between individual tests. Women aged between 45 and 55 only receive an invitation if they tested positive in previous rounds or did not attend. The maximum screening interval can therefore be extended by 10 years for women from the age of 40.

Breast cancer screening programme

The breast CSP became nationally available in 1990.[7] All women aged between 50 and 75 years (till 1998 age boundaries were 50-70 years) are biennially invited by letter, via a local screening organization, for a mammography. Women are able to refuse participation by unsubscribing from the invitation letters, either temporarily or for all future invitations. Most mammographies take place at mobile research units, where two independent radiologists assess the mammogram (double reading). The results are shared with the participants via the screening organizations. In case of an unclear outcome of a mammogram or when a disorder is detected, further investigation will be needed and the GP will be informed. The GP will contact the participant and arrange a hospital referral. Women are informed about the outcome by letter via the screening organization, which also provides information on the subsequent follow-up.[8]

Colorectal cancer screening programme

The CSP for colorectal cancer (CRC) is relatively new (2014) and the entire programme should be fully implemented by 2019.[9] Invitation depends on year of birth, and both men and women aged between 55-75 years are invited. Invitees can choose to unsubscribe from participation. In case of no response a reminder is sent after two months. If a re-invitation remains without response, the potential participant will only be re-invited after an interval of two years.[10] The faecal immunochemical test (FIT) was chosen as screening test, since previous studies found this test to be the most acceptable to the Dutch population.[11] This test can easily be performed at home. FIT screening requires successive screening rounds for optimal programme sensitivity.[11] The cut off level for a positive FIT was increased in mid-2014 from 15 to 47µg Hb/g faeces. This was done in order to reduce the burden of unnecessary colonoscopies and improve colonoscopy capacity. Referral is arranged by the local screening organization.[12] The GP has no active role within this CSP, but patients are advised to seek contact with their GP after a positive FIT.[13]

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B. Mesh terms and free text search. As used for the initial search in PubMed

('Mass Screening'[Mesh] OR 'Mass Screening'[All fields] OR 'Mass Screenings'[All fields] OR 'cancer screening'[All fields] OR 'cancer screening programme'[All fields] OR 'Screening programme'[All fields] OR 'population screening'[All fields] OR 'screening programmes'[All fields] OR 'national population screening'[All fields] OR 'cancer screening programs'[All fields] OR 'screening programs'[All fields] OR 'Early Detection of Cancer'[Mesh] OR 'Early Detection of Cancer'[All fields] OR 'screening'[all fields]) AND ('Breast Neoplasms'[Mesh] OR 'Breast Neoplasms'[All fields] OR 'Breast neoplasm'[All fields] OR 'Breast cancer'[All fields] OR 'Breast cancers'[All fields] OR 'Mammary cancer'[All fields] OR 'Mammary cancers'[All fields] OR 'Breast carcinoma'[All fields] OR 'Breast carcinomas'[All fields] OR Colorectal*[all fields] OR 'colon'[all fields] OR 'Colorectal Neoplasms'[Mesh] OR 'Colorectal Neoplasms'[All fields] OR 'colorectal neoplasm'[All fields] OR 'colorectal carcinoma'[All fields] OR 'Colorectal Carcinomas'[All fields] OR 'Colorectal tumor'[All fields] OR 'Colorectal tumors'[All fields] OR 'colorectal cancer'[All fields] OR 'colorectal cancers'[All fields] OR 'colorectal adenomas'[all fields] OR 'colorectal cancer screening'[all fields] OR 'uterine'[all fields] OR 'uterus'[all fields] OR 'cervix'[all fields] OR 'cervical'[all fields] OR 'Uterine Cervical Neoplasms'[Mesh] OR 'Uterine Cervical Neoplasms'[All fields] OR 'Cervix cancer'[All fields] OR 'cervix cancers'[All fields] OR 'cervix neoplasm'[All fields] OR 'cervix neoplasms'[All fields] OR 'cervical neoplasms'[All fields] OR 'cervical neoplasm'[All fields] OR 'cervix carcinoma'[All fields] OR 'cervical cancer'[All fields] OR 'cervical carcinoma'[All fields] OR 'Neoplasms'[Mesh] OR 'Neoplasms'[All fields] OR 'neoplasm'[All fields] OR 'cancer'[All fields] OR 'cancers'[All fields] OR 'carcinoma'[All fields] OR 'carcinomas'[All fields] OR 'tumor'[All fields] OR 'tumors'[All fields] OR 'cancer screening'[all fields]) AND ('Netherlands'[Mesh] OR 'Netherlands'[all fields] OR 'Netherlands'[ad] OR 'Holland'[tw] OR 'Dutch'[All fields] OR 'hague'[tw]) AND ('No-Show Patients'[Mesh] OR Non attend*[all fields] OR nonattend*[all fields] OR 'Non attending patients'[All fields] OR 'No Show patient'[All fields] OR 'No Show patients'[All fields] OR No-Show*[all fields] OR noshow*[all fields] OR 'uptake'[All fields] OR 'participate'[All fields] OR 'participation'[All fields] OR 'patient participation'[Mesh] OR 'Patient participation'[All fields] OR 'screening uptake'[All fields] OR 'attending'[All fields] OR 'attendance'[All fields] OR 'Mass Screening/utilization'[Mesh] OR 'Patient Dropouts'[Mesh] OR Dropout*[all fields] OR drop out*[all fields] OR dropped out*[all fields] OR 'Patient Compliance'[Mesh] OR 'compliance'[all fields] OR compliant*[all fields] OR comply*[all fields] OR 'utilization' [Subheading] OR 'Utilization Review'[Mesh] OR utilisation*[all fields] OR utilization*[all fields] OR 'Patient Acceptance of Health Care'[Mesh])