**Supporting Information: Table 1.** Colorectal cancer screening test performance assumptions, Microsimulation Screening Analysis-Colon (MISCAN-colon)

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| --- | --- | --- | --- | --- | --- | --- |
|  | **Test** | | |  | | |
| **Performance characteristic** | Optical Colono-scopy | Flexible  Sigmoido-scopy | CT  Colono-  graphy | | FIT  (OC-Sensor,>20 ng/g cutoff) | FOBT  (Hemoccult II) |
| Sensitivity per lesion |  |  |  | |  |  |
| Adenomas ≤ 5 mm | 75% | 75% | 0.0% | | 0.0% | 0.0% |
| Adenomas 6 - 9 mm | 85% | 85% | 75.7% | | 4.4% | 1.3% |
| Adenomas ≥ 10 mm | 95% | 95% | 85.9% | | 13.1% | 6.5% |
| Early stage I-IV cancer \* | 95% | 95% | 95% | | 52% | 18.2% |
| Late stage I-IV cancer \* | 95% | 95% | 95% | | 83.5% | 50.8% |
| Specificity † | 100% | 100% | 91.4% | | 97.6% | 98% |
| Completeness ‡ | 98% | - | - | | - | - |

FIT = Fecal Immunochemical Test; FOBT = guaiac Fecal Occult Blood Test.

\* We assumed that fecal testing is more sensitive in preclinical cancers that are close time-wise to becoming symptomatic, i.e. towards the end of the occult invasive period. This assumption showed good concordance with guaiac fecal occult blood test trial results.

† The probability of a false positive result was random in the base-case analysis, and independent of person or lesion. We assumed perfect specificity for colonoscopy and sigmoidoscopy with pathological follow-up examination.

‡ This is the proportion of colonoscopies visualizing the maximum point of reach of the endoscope, i.e. the cecum. Sigmoidoscopy was assumed to reach the splenic flexure in 80% of examinations.