Supplementary table 1. Overview of publicly available documents on quality measures available in the Netherlands and the United Kingdom and HTA assessments published by ZIN and NICE included in this study

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| **Breast Cancer** |
| **Type of** **document** | **Institute** | **Document name** | **Year published** | **Indication** | **Drug** |
| HTA | ZIN | Abemaciclib (Verzenios®) for the treatment of metastatic breast cancer | 2019 | Hormone receptor positive, HER2-negative advanced or metastatic breast cancer | Abemaciclib |
| HTA | NICE | Abemaciclib with fulvestrant for treating hormone receptor-positive, HER2-negative advanced breast cancer after endocrine therapy (TA579); Abemaciclib with an aromatase inhibitor for previously untreated, hormone receptor-positive, HER2-negative, locally advanced or metastatic breast cancer (TA563) | 2019 | Hormone receptor positive, HER2-negative advanced breast cancer | Abemaciclib |
| HTA | ZIN | Ribociclib (Kisqali®) for the treatment of metastatic breast cancer | 2017 | Metastatic breast cancer | Ribociclib |
| HTA | NICE | Ribociclib with an aromatase inhibitor for previously untreated, hormone receptor-positive, HER2-negative, locally advanced or metastatic breast cancer (TA496) | 2017 | Hormone receptor positive, HER2-negative locally advanced or metastatic breast cancer | Ribociclib |
| QM | NLa | Transparency calendar for medical specialist care 2020, and indicators factsheet breast cancer audit 2020 | 2019 | Primary breast cancer, including ductal carcinoma in situ, invasive carcinoma, paget’s disease, inflammatory breast cancer, tumors of all stages including distant metastasis. Excluding lobular carcinoma in situ, recurrent breast cancer, phyllodes tumors and non-surgically treated patients  | N/A |
| QM | UKb | Breast cancer quality standard | 2011, last updated 2016 | Early (ductal carcinoma in situ and evasive), locally advanced and advanced breast cancer, recurrent breast cancer and familial breast cancer in adults | N/A |
|  |  |  |  |  |  |
| **Lung cancer** |
| **Type of document** | **Institute** | **Document name** | **Year published** | **Indication** | **Drug** |
| HTA | ZIN | Durvalumab (Imfinzi®) fort he treatment of locally advanced, unresectable, non-small-cell lung cancer | 2019 | Locally advanced unresectable NSCLC | Durvalumab |
| HTA | NICE | Durvalumab for treating locally advanced unresectable non-small-cell lung cancer after platinum-based chemoradiation | 2019 | Locally advanced unresectable NSCLC | Durvalumab |
| HTA | ZIN | Osimertinib (Tagrisso®) for first line treatment of patients with advanced or metastatic EGFR mutation-positive non-small-cell lung cancer  | 2018 | Advanced or metastatic NSCLC | Osimertinib |
| HTA | NICE | Osimertinib for untreated EGFR mutation-positive non-small-cell lung cancer | 2020 | Untreated EGFR mutation-positive NSCLC | Osimertinib |
| QM | NLa | Transparency calendar for medical specialist care 2020, and indicator guide lung cancer 2020 | 2019 | Lung cancer | N/A |
| QM | UKb | Lung cancer in adults quality standard | 2012, last updated 2019 | Lung cancer | N/A |
|  |  |  |  |  |  |

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| **Colorectal cancer** |
| **Type of document** | **Institute** | **Document name** | **Year published** | **Indication** | **Drug** |
| HTA | ZIN | Cetuximab (Erbitux®) for the treatment of metastatic colorectal cancer (re-assessment) | 2017 | Metastatic colorectal cancer | Cetuximab |
| HTA | NICE | Cetuximab and panitumumab for previously untreated metastatic colorectal cancer (TA439) | 2017 | Previously untreated metastatic colorectal cancer | Cetuximab & panitumumab |
| HTA | ZIN | Panitumumab (Vectibix®) for the treatment of metastatic colorectal cancer | 2015 | Metastatic colorectal cancer | Panitumumab  |
| HTA | NICE | Cetuximab and panitumab for previously untreated metastatic colorectal cancer | 2017 | Metastatic colorectal cancer | Panitumumab |
| QM | NLa | Transparency calendar for medical specialist care 2020, and indicator guide colorectal cancer 2020 | 2019 | Including all primary colorectal carcinoma, for which part of the colon or rectum has been resected. All primary rectal tumors undergoing the watchful waiting strategy (also without resection). Excluding resections, dysplastic polyps, sarcoma, carcinoid tumors, melanomas, gastrointestinal stromal tumors, lymphoma, and loco-regional or distant recurrences of a colorectal carcinoma.  | N/A |
| QM | UKb | Colorectal cancer quality standard | 2012, last updated 2020 | Colorectal cancer (colon cancer and rectal cancer) | N/A |
|  |  |  |  |  |  |

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| --- |
| **Prostate cancer** |
| **Type of document** | **Institute** | **Document name** | **Year published** | **Indication** | **Drug** |
| HTA | ZIN | Abirateron (Zytiga) for the treatment of castration-resistant metastatic prostate cancer | 2012 | Metastatic castration resistant prostate cancer | Abiraterone |
| HTA | NICE | Abiraterone for castration-resistant metastatic prostate cancer previously treated with a docetaxel-containing regimen | 2016 | Metastatic castration resistant prostate cancer | Abiraterone |
| HTA | ZIN | Cabazitaxel (Jevtana®) for the treatment of metastatic prostate cancer | 2011 | Metastatic prostate cancer | Cabazitaxel |
| HTA | NICE | Cabazitaxel for hormone-relapsed metastatic prostate cancer treated with docetaxel | 2016 | Metastatic prostate cancer | Cabazitaxel |
| QM | NLa | Transparency calendar for medical specialist care 2020, and indicator guide prostate cancer 2020 | 2019 | Prostate cancer | N/A |
| QM | UKb | Prostate cancer quality standard | 2015, last updated 2019 | Prostate cancer | N/A |

a Available from: www.zorginzicht.nl
b Available from: www.nice.org.uk/standards-and-indicatorsCEA, cost-effectiveness assessment; EGFR, Epidermal Growth Factor Receptor; HER2, Human Epidermal growth factor Receptor 2; HTA, Health Technology Assessment; ICHOM, International Consortium of Outcome Measures; N/A, Not Applicable; NICE, National Institute for Health and Care Excellence; NL, the Netherlands; NSCLC, non-small cell lung cancer; QM, Quality Measure; REA, relative effectiveness assessment; UK, the United Kingdom; ZIN, National Health Care Institute.

Supplementary table 2. Overview of specific Health Related Quality of Life questionnaires used for quality improvement (NL, UK), in HTA (NL, UK) and recommended by ICHOM standard sets

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| **Outcome measure** | **Quality Measure** |  |  | **HTA** |  |  | **ICHOM**a |
|  | **NL** | **UK** | **NL** |  | **UK** |  |  |
|  |  |  | **REA** | **CEA** | **REA** | **CEA** |  |
| **Breast cancer** |  |  |  |  |  |  |  |
|  Generic |  |  | EQ-5D | EQ-5D | EQ-5D | EQ-5D |  |
|  |  |  |  |  | BPI short form (pain intensity) |  |  |
|  Disease specific | EORTC QLQ-C30 |  | EORTC QLQ-C30 |  | EORTC QLQ-C30 | EORTC QLQ-C30 | EORTC QLQ-C30 |
|  | EORTC QLQ-BR23 |  | EORTC QLQ-BR23 |  | EORTC QLQ-BR23 (safety and breast cancer module) |  | EORTC-QLQ-BR23 |
|  | BREAST-Q |  |  |  |  |  | BREAST-Q |
|  |  |  |  |  |  | Breast cancer module  | EORTC QLQ-LMC21 (single item) |
|  |  |  |  |  |  |  | FACT-ES (single items) |
| **Lung cancer** |  |  |  |  |  |  |  |
|  Generic |  |  | HRQoL (unspecified) | EQ-5Db | EQ-5D | EQ-5Db |  |
|  Disease specific |  |  |  |  | EORTC QLQ-C30 |  | EORTC QLQ-C30 |
|  |  |  |  |  | EORTC QLQ-LC13 |  | EORTC QLQ-LC13 |
|  |  | HRQoL for adults with lung cancer (unspecified) |  |  | EORTC QLQ-LC12 CTSQ-16 PRO-CTCAE |  |  |
| **Colorectal cancer** |  |  |  |  |  |  |  |
|  Generic |  |  | EQ-5D | EQ-5D |  | EQ-5D |  |
|  |  |  | Increase in HIS |  | HRQoL (unspecified) |  |  |
|  Disease specific |  |  | EORTC QLQ-C30 |  |  |  | EORTC QLQ-C30 |
|  | Percentage of patients participated in the PREM oncology questionnaire |  |  |  |  |  | EORTC QLQ-CR29MSKCC bowel function – dietary subscaleEORTC QLQ-LMC21 (single item) |
| **Prostate cancer** |  |  |  |  |  |  |  |
|  Generic |  |  |  | EQ-5Dc |  | EQ-5Dc |  |
|  Disease Specific | EPIC-26 (minimally questions 5 and 18) |  |  |  |  |  | EPIC-26 |
|  |  |  | Pain intensity score, pain medication score, reduction of pain intensity measured using BPI-SF |  | Pain progression |  | Use of over the counter pain medication or strong pain medication |
|  |  |  |  |  | QoL FACT-P |  | EORTC QLQ-PR25 |
|  |  |  |  |  |  |  | Additional questions from the Utilization of Sexual Medications/ Devices questionnaire |

a The standard sets of advanced and localized prostate cancer are reported under prostate cancer
bThe EORTC QLQ-C30 and QLQ-LC13 were used to map EQ5-D utility values
cThe FACT-P was used to map EQ5-D utility values
BPI, Brief Pain Inventory; BPI-SF, Brief Pain Inventory Short Form; BREAST-Q, Breast Cancer Questionnaire; CEA, cost-effectiveness assessment; CTSQ-16, Cancer Therapy Satisfaction Questionnaire; EORTC, the European Organization for Research and Treatment of Cancer; EPIC-26, Expanded Prostate Cancer Index Composite 26;

EQ-5D, EuroQol-5 Dimension; FACT-ES, Functional Assessment of Cancer Therapy Endocrine Symptoms; FACT-P, Functional Assessment of Cancer Therapy Prostate;

HRQoL, health related quality of life; HTA, Health Technology Assessment; ICHOM, International Consortium of Outcome Measures; MSKCC, Memorial Sloan-Kettering Cancer Center; NICE, National Institute for Health and Care Excellence; NL, the Netherlands; PRO-CTCAE, Patient Reported Outcomes Common Terminology Criteria for Adverse Events; QLQ-BR23 Quality of Life Questionnaire Breast Cancer 23; QLQ-C30, Quality of Life Questionnaire Cancer 30; QLQ-CR29 Quality of Life Questionnaire Colorectal Cancer 29; QLQ-LC12 Quality of Life Questionnaire Lung Cancer 12; QLQ-LC13 Quality of Life Questionnaire Lung Cancer 13; QLQ-LMC21 Quality of Life Questionnaire Colorectal Liver Metastases 21; QLQ-PR25 Quality of Life Questionnaire Prostate Cancer 25; REA, relative effectiveness assessment; UK, the United Kingdom; ZIN, National Health Care Institute.

Supplementary table 3. Other outcome measures used for quality improvement (NL, UK), in HTA (NL, UK) and recommended by ICHOM standard sets

|  |  |  |  |
| --- | --- | --- | --- |
| **Outcome measure** | **Quality Measure** | **HTA** | **ICHOM**a |
|  | **NL** | **UK** | **NL** | **UK** |  |
|  |  |  | **REA** | **CEA** | **REA** | **CEA** |  |
| **Response rate of tumor** |  |  |  |  |  |  |  |
| Breast cancer |  |  |  |  | **X** | **X** |  |
| Lung cancer |  |  | **X** |  | **X** |  |  |
| Colorectal cancer |  |  | **X** |  | **X** |  | **X** |
| Prostate cancer |  |  | **X** |  |  |  |  |
| **Margin status** |  |  |  |  |  |  |  |
| Breast cancer |  |  |  |  |  |  | **X** |
| Lung cancer |  |  |  |  |  |  |  |
| Colorectal cancer |  |  |  |  |  |  | **X** |
| Prostate cancer |  |  |  |  |  |  |  |
| **Patient satisfaction** |  |  |  |  |  |  |  |
| Breast cancer |  | **X** |  |  |  |  |  |
| Lung cancer |  | **X** |  |  |  |  |  |
| Colorectal cancer |  |  |  |  |  |  |  |
| Prostate cancer |  | **X** |  |  |  |  |  |
| **Other** |  |  |  |  |  |  |  |
| Breast cancer |  |  |  |  |  |  |  |
| Lung cancer |  |  |  |  |  |  | **X**b |
| Colorectal cancer | **X**c | **X**c |  | **X**c | **X**c | **X**c | **X**d |
| Prostate cancer | **X**e |  | **X**e |  | **X**e |  |  |

a The standard sets of advanced and localized prostate cancer are reported under prostate cancer
b Information on the duration of time spent in hospital at the end of life was to be collected
c Information on resection was collected
d Information on hospital admission at the end of life and stoma status was to be collected e Information on PSA values was collected
CEA, cost-effectiveness assessment; HTA, Health Technology Assessment; ICHOM, International Consortium of Outcome Measures; NICE, National Institute for Health and Care Excellence; NL, the Netherlands; REA, relative effectiveness assessment; UK, the United Kingdom; ZIN, National Health Care Institute.