**Supplementary file**

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| **# ▲** | **Searches** |
| 1 | ((late or mature or mainstream or ''ex post'' or ''ex-post'' or ''post market'' or ''post-market'' or ''post commercialization'' or ''post-commercialization'') adj5 (technology assessment? or technology appraisal? or economic evaluation? or economic assessment? or cost-effectiveness assessment? or cost benefit analysis? or surveillance)).ti,ab. |
| 2 | biomedical technology assessment/ |
| 3 | (technology assessment? or technology appraisal?).ti,ab. |
| 4 | 2 or 3 |
| 5 | ((late or mature or ''ex post'' or ''ex post'' or ''ex-post'' or ''post market'' or ''post-market'' or ''post commercialization'' or ''post-commercialization'' or dissemination or adoption) adj3 (stage? or phase?)).ti,ab. |
| 6 | randomized controlled trial/ |
| 7 | ((clinical or ''real world'' or ''real-world'') adj5 (trial\* or stud\* or evidence or data)).ti,ab. |
| 8 | 5 or 6 or 7  |
| 9 | 4 and 8 |
| 10 | (technology assessment? or technology appraisal?).ti. |
| 11 | ((late or mature or mainstream or traditional or ''ex post'' or ''ex-post'' or ''post market'' or ''post-market'' or ''post commercialization'' or ''post-commercialization'') adj (assessment? or evaluation?)).ti. |
| 12 | 10 or 11 |
| 13 | medical technology/ |
| 14 | (device? or technolog\* or test? or diagnostic? or biomarker? or biological marker? or imaging? or product? or intervention?).ti. |
| 15 | 13 or 14 |
| 16 | 12 and 15 |
| 17 | 9 or 16 |
| 18 | "cost effectiveness analysis"/ or economic evaluation/ |
| 19 | statistical model/ |
| 20 | theoretical model/ |
| 21 | (cost\* or economic\* or "resource use" or resource allocation or budget? or payer? or payment? or "willingness to pay" or payback or "real world data" or "real world evidence" or "real evidence" or "real data").ti,ab. |
| 22 | 18 or 19 or 20 or 21 |
| 23 | 17 and 22 |
| 24 | 1 or 23 |

Search string for EMBASE (search/exportation date: February 2024)

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| **# ▲** | **Searches** |
| 1 | ((late or mature or mainstream or ''ex post'' or ''ex-post'' or ''post market'' or ''post-market'' or ''post commercialization'' or ''post-commercialization'') adj5 (technology assessment? or technology appraisal? or economic evaluation? or economic assessment? or cost-effectiveness assessment? or cost benefit analysis? or surveillance)).ti,ab. |
| 2 | Technology Assessment, Biomedical/ec, mt, og, st, sn, td [Economics, Methods, Organization & Administration, Standards, Statistics & Numerical Data, Trends] |
| 3 | (technology assessment? or technology appraisal?).ti,ab. |
| 4 | 2 or 3 |
| 5 | ((late or mature or ''ex post'' or ''ex post'' or ''ex-post'' or ''post market'' or ''post-market'' or ''post commercialization'' or ''post-commercialization'') adj3 (stage? or phase?)).ti,ab. |
| 6 | randomized controlled trial/ |
| 7 | ((clinical or ''real world'' or ''real-world'') adj5 (trial\* or evidence or data)).ti,ab. |
| 8 | 5 or 6 or 7  |
| 9 | 4 and 8 |
| 10 | (technology assessment? or technology appraisal?).ti. |
| 11 | ((late or mature or mainstream or traditional or ''ex post'' or ''ex-post'' or ''post market'' or ''post-market'' or ''post commercialization'' or ''post-commercialization'') adj (assessment? or evaluation?)).ti. |
| 12 | 10 or 11 |
| 13 | Biomedical Technology/ec, mt, og, st, sn, td [Economics, Methods, Organization & Administration, Standards, Statistics & Numerical Data, Trends] |
| 14 | (device? or technolog\* or test? or diagnostic? or biomarker? or biological marker? or imaging? or product? or intervention?).ti. |
| 15 | 13 or 14 |
| 16 | 12 and 15 |
| 17 | 9 or 16 |
| 18 | Cost-Benefit Analysis/ec, mt, og, st, sn, td [Economics, Methods, Organization & Administration, Standards, Statistics & Numerical Data, Trends] |
| 19 | exp models, economic/ |
| 20 | models, theoretical/ or models, statistical/ |
| 21 | (cost\* or economic\* or "resource use" or resource allocation or budget? or payer? or payment? or "willingness to pay" or payback or "real world data" or "real world evidence" or "real evidence" or "real data").ti,ab. |
| 22 | 18 or 19 or 20 or 21 |
| 23 | 17 and 22 |
| 24 | 1 or 23 |

Search string for Ovid MEDLINE (search date: February 2024)

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| History Count | Search Terms |
| 3 | ( TITLE-ABS-KEY ( ( late  W/5  "technology assessment\*" )  OR  ( late  W/5  "technology appraisal\*" )  OR  ( late  W/5  "economic evaluation\*" )  OR  ( late  W/5  "cost effectiveness assessment\*" )  OR  ( late  W/5  "cost benefit analysis" ) )  OR  TITLE-ABS-KEY ( ( mature  W/5  "technology assessment\*" )  OR  ( mature  W/5  "technology appraisal\*" )  OR  ( mature  W/5  "economic evaluation\*" )  OR  ( mature  W/5  "cost effectiveness assessment\*" )  OR  (mature  W/5  "cost benefit analysis" ) )  OR  TITLE-ABS-KEY ( ( mainstream  W/5  "technology assessment\*" )  OR  ( mainstream W/5  "technology appraisal\*" )  OR  (mainstream  W/5  "economic evaluation\*" )  OR  ( mainstream  W/5  "cost effectiveness assessment\*" )  OR  ( mainstream  W/5  "cost benefit analysis" ) ) OR  TITLE-ABS-KEY ( ( "ex post"  W/5  "technology assessment\*" )  OR  ("ex post"  W/5  "technology appraisal\*" )  OR  ("ex post" W/5  "economic evaluation\*" )  OR  ("ex post" W/5  "cost effectiveness assessment\*" )  OR  ("ex post" W/5  "cost benefit analysis" ) OR  ("ex post" W/5  "appraisal" ) ) OR  TITLE-ABS-KEY ( ( "ex-post" W/5  "technology assessment\*" )  OR  ("ex-post"   W/5  "technology appraisal\*" )  OR  ("ex-post" W/5  "economic evaluation\*" )  OR  ("ex-post" W/5  "cost effectiveness assessment\*" )  OR  ("ex-post" W/5  "cost benefit analysis" ) OR  ("ex post" W/5  "appraisal" ) ) OR  TITLE-ABS-KEY ( ( "post market" W/5  "technology assessment\*" )  OR  ("post market"   W/5  "technology appraisal\*" )  OR  ("post market" W/5  "economic evaluation\*" )  OR  ("post market" W/5  "cost effectiveness assessment\*" )  OR  ("post market" W/5  "cost benefit analysis" ) OR  ("ex post" W/5  "appraisal" ) ) OR  TITLE-ABS-KEY ( ( "post-market"  W/5  "technology assessment\*" )  OR  ("post-market"   W/5  "technology appraisal\*" )  OR  ("post-market"  W/5  "economic evaluation\*" )  OR  ("post-market" W/5  "cost effectiveness assessment\*" )  OR  ("post-market" W/5  "cost benefit analysis" ) ) OR  TITLE-ABS-KEY ( ( "post-commercialization"  W/5  "technology assessment\*" )  OR  ("post-commercialization"  W/5  "technology appraisal\*" )  OR  ("post-commercialization"  W/5  "economic evaluation\*" )  OR  ("post-commercialization" W/5  "cost effectiveness assessment\*" )  OR  ("post-commercialization" W/5  "cost benefit analysis" ) ) OR  TITLE-ABS-KEY ( ( "post commercialization"  W/5  "technology assessment\*" )  OR  ("post commercialization"   W/5  "technology appraisal\*" )  OR  ("post commercialization"  W/5  "economic evaluation\*" )  OR  ("post commercialization" W/5  "cost effectiveness assessment\*" )  OR  ("post commercialization" W/5  "cost benefit analysis" ) ) )  |
| 4 | TITLE-ABS-KEY ( "technology assessment?"  OR  "technology appraisal?" )  |
| 7 | ( TITLE-ABS-KEY ( ( early  W/3  stage\* )  OR  ( early  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( preliminary  W/3  stage\* )  OR  ( preliminary  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( initial  W/3  stage\* )  OR  ( initial  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( design\*  W/3  stage\* )  OR  ( design\*  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( development  W/3  stage\* )  OR  ( development  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( implementation  W/3  stage\* )  OR  ( implementation  W/3  phase\* ) ) )  |
| 8 | TITLE-ABS-KEY ( ( research  W/5  translat\* )  OR  ( research  W/5  implement\* )  OR  ( technolog\*  W/5  translat\* )  OR  ( technolog\*  W/5  implement\* ) )  |
| 12 | ( ( TITLE-ABS-KEY ( ( late  W/5  "technology assessment\*" )  OR  ( late  W/5  "technology appraisal\*" )  OR  ( late  W/5  "economic evaluation\*" )  OR  ( late  W/5  "cost effectiveness assessment\*" )  OR  ( late  W/5  "cost benefit analysis" ) )  OR  TITLE-ABS-KEY ( ( mature  W/5  "technology assessment\*" )  OR  ( mature  W/5  "technology appraisal\*" )  OR  ( mature  W/5  "economic evaluation\*" )  OR  ( mature  W/5  "cost effectiveness assessment\*" )  OR  ( mature  W/5  "cost benefit analysis" ) )  OR  TITLE-ABS-KEY ( ( mainstream  W/5  "technology assessment\*" )  OR  ( mainstream  W/5  "technology appraisal\*" )  OR  ( mainstream  W/5  "economic evaluation\*" )  OR  ( mainstream  W/5  "cost effectiveness assessment\*" )  OR  ( mainstream  W/5  "cost benefit analysis" ) )  OR  TITLE-ABS-KEY ( ( "ex post"  W/5  "technology assessment\*" )  OR  ( "ex post"  W/5  "technology appraisal\*" )  OR  ( "ex post"  W/5  "economic evaluation\*" )  OR  ( "ex post"  W/5  "cost effectiveness assessment\*" )  OR  ( "ex post"  W/5  "cost benefit analysis" )  OR  ( "ex post"  W/5  "appraisal" ) )  OR  TITLE-ABS-KEY ( ( "ex-post"  W/5  "technology assessment\*" )  OR  ( "ex-post"  W/5  "technology appraisal\*" )  OR  ( "ex-post"  W/5  "economic evaluation\*" )  OR  ( "ex-post"  W/5  "cost effectiveness assessment\*" )  OR  ( "ex-post"  W/5  "cost benefit analysis" )  OR  ( "ex post"  W/5  "appraisal" ) )  OR  TITLE-ABS-KEY ( ( "post market"  W/5  "technology assessment\*" )  OR  ( "post market"  W/5  "technology appraisal\*" )  OR  ( "post market"  W/5  "economic evaluation\*" )  OR  ( "post market"  W/5  "cost effectiveness assessment\*" )  OR  ( "post market"  W/5  "cost benefit analysis" )  OR  ( "ex post"  W/5  "appraisal" ) )  OR  TITLE-ABS-KEY ( ( "post-market"  W/5  "technology assessment\*" )  OR  ( "post-market"  W/5  "technology appraisal\*" )  OR  ( "post-market"  W/5  "economic evaluation\*" )  OR  ( "post-market"  W/5  "cost effectiveness assessment\*" )  OR  ( "post-market"  W/5  "cost benefit analysis" ) )  OR  TITLE-ABS-KEY ( ( "post-commercialization"  W/5  "technology assessment\*" )  OR  ( "post-commercialization"  W/5  "technology appraisal\*" )  OR  ( "post-commercialization"  W/5  "economic evaluation\*" )  OR  ( "post-commercialization"  W/5  "cost effectiveness assessment\*" )  OR  ( "post-commercialization"  W/5  "cost benefit analysis" ) )  OR  TITLE-ABS-KEY ( ( "post commercialization"  W/5  "technology assessment\*" )  OR  ( "post commercialization"  W/5  "technology appraisal\*" )  OR  ( "post commercialization"  W/5  "economic evaluation\*" )  OR  ( "post commercialization"  W/5  "cost effectiveness assessment\*" )  OR  ( "post commercialization"  W/5  "cost benefit analysis" ) ) ) )  OR  ( TITLE-ABS-KEY ( "technology assessment?"  OR  "technology appraisal?" ) ) )  AND  ( ( TITLE-ABS-KEY ( ( research  W/5  translat\* )  OR  ( research  W/5  implement\* )  OR  ( technolog\*  W/5  translat\* )  OR  ( technolog\*  W/5  implement\* ) ) )  OR  ( TITLE-ABS-KEY ( ( late  W/3  stage\* )  OR  ( late  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( mature  W/3  stage\* )  OR  ( mature  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( "ex post"  W/3  stage\* )  OR  ( "ex post"  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( "ex-post"  W/3  stage\* )  OR  ( "ex-post"  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( "post market"  W/3  stage\* )  OR  ( "post market"  W/3  phase\* )  OR  ( "post market"  W/3  surveillance ) )  OR  TITLE-ABS-KEY ( ( "post-market"  W/3  stage\* )  OR  ( "post-market"  W/3  phase\* )  OR  ( "post-market"  W/3  surveillance ) )  OR  TITLE-ABS-KEY ( ( dissemination  W/3  stage\* )  OR  ( dissemination  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( adoption  W/3  stage\* )  OR  ( adoption  W/3  phase\* ) )  OR  TITLE-ABS-KEY ( ( "post commercialization"  W/3  stage\* )  OR  ( "post commercialization"  W/3  phase\* ) )  ... )  OR  ( TITLE-ABS-KEY ( ( clinical  W/5  trial\* )  OR  ( clinical  W/5  stud\* )  OR  ( clinical  W/5  evidence )  OR  ( clinical  W/5  data ) )  OR  TITLE-ABS-KEY ( ( "real world"  W/5  evidence )  OR  ( "real world"  W/5  data )  OR  ( "real world"  W/5  stud\* ) )  OR  TITLE-ABS-KEY ( ( "real-world"  W/5  evidence )  OR  ( "real-world"  W/5  data )  OR  ( "real-world"  W/5  stud\* ) ) ) )  |

Search string for SCOPUS (search/exportation date: February 2024)

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| Results of the quality assessment |
| NICE Qualitative Assessment Tool | **Number of studies** | **Percentage of all studies (%)** |
| ++ | 8 | 5% |
| + | 41 | 28% |
| - | 96 | 67% |