**Table 1. Committee decisions for 58 drug-indication pairs by appraisal year**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Decision | 2008 | 2010 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Overall |
| SK–positively recommended |  |  |  | **4** | **5** | **5** | **6** | **18** | **9** | **4** | **51** |
| *Routine use* |  |  |  | *1* | *4* | *1* | *1* | *1* | *6* | *2* | *16* |
| *Simple finance-based agreement\** |  |  |  | *3* | *1* | *1* | *2* | *6* | *1* |  | *14* |
| *Other finance-based agreement\*\** |  |  |  |  |  | *3*  *(3)* | *3*  *(3)* | *11*  *(5)* | *2*  *(1)* | *2* | *21*  *(12)* |
| *Performance-based agreements\*\*\** |  |  |  |  |  |  |  |  |  |  |  |
| SK-not recommended |  |  |  | **1** |  |  |  | **3** | **2** | **1** | **7** |
| England-positively recommended | **1** | **1** | **3** |  | **3** | **2** | **12** | **13** | **7** | **5** | **47** |
| *Routine use* | *1* | *1* |  |  |  |  | *2* |  |  |  | *4* |
| *Simple finance-based agreement\** |  |  | *2* |  | *3* | *2* | *7* | *9* | *6* | *2* | *31* |
| *Other finance-based agreement\*\** |  |  | *1* |  |  |  | *2* | *1* |  | *1* | *5* |
| *Performance-based agreements\*\*\** |  |  |  |  |  |  | *1* | *3* | *1* | *2* | *7* |
| England-not recommended |  | **2** | **1** |  | **1** | **2** |  | **3** | **2** |  | **11** |

SK = South Korea

\*The simple finance-based agreements included Korean refund and British PAS simple discount.

\*\*The other finance-based agreements included Korean expenditure caps and British commercial arrangements. The number of decisions made through the Economic Evaluation Exemption Procedure in South Korea is in parenthesis.

\*\*\*The performance-based agreements included British managed access agreement.

**Table 2. Characteristics of evidence in appraisal of 58 product/indication pairs in South Korea and England**

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristics | | South Korea  (n=58) | England  (n=58) |
| Recommendation | Routine use | 16 (28%) | 4 (7%) |
| Simple finance-based agreement\* | 14 (24%) | 31 (53%) |
| Other finance-based agreement\*\* | 21 (36%) | 5 (9%) |
| Performance-based agreement\*\*\* | 0 (0%) | 7 (12%) |
| Not recommended | 7 (12%) | 11 (19%) |
| Pivotal study designs of clinical evidence | RCT(s) | 50 (86%) | 52 (90%) |
| Single-arm trial(s) only | 7 (12%) | 6 (10%) |
| No information | 1 (2%) | 0 (0%) |
| Comparator(s) Comparison | Head-to-head comparison | 33 (57%) | 42 (72%) |
| Indirect comparison only | 25 (43%) | 16 (28%) |
| *IC only, unacceptable* | *0 (0%)* | *6 (10%)* |
| Overall survival | Provided | 30 (52%) | 34 (59%) |
| *>= 3 months* | *17 (29%)* | *17a (29%)* |
| *< 3 months* | *7 (12%)* | *11 (19%)* |
| *NS* | *6 (10%)* | *5 (9%)* |
| *Mixed* | *0 (0%)* | *1b (2%)* |
| Not provided | 19 (33%) | 10 (17%) |
| Immature | 9 (16%) | 14 (24%) |
| Generalizability | Generalizable | 1 (2%) | 34 (59%) |
| Not generalizable | 0 (0%) | 14 (24%) |
| No information | 57 (98%) | 10 (17%) |
| Economic evidence | ICER estimate | 25 (43%) | 56 (97%) |
| *Within the cost-effective range for usual condition* | *6 (10%)* | *14c (24%)* |
| *Within the cost-effective range for special condition* | *18 (31%)* | *26d (45%)* |
| *Above the cost-effective range* | *1 (2%)* | *14 (24%)* |
| *Highly uncertain* | *0 (0%)* | *2 (3%)* |
| Cost comparison | 20*e* (34%) | 0 (0%) |
| External reference pricing | 12 (21%) | 0 (0%) |
| No estimate | 1 (2%) | 2 (3%) |

IC = indirect comparison; ICER = incremental cost-effectiveness ratio; NS = not significant; OS = overall survival; RCT=Randomized controlled trial

\*The simple finance-based agreements included Korean refund and British PAS simple discount.

\*\*The other finance-based agreements included Korean expenditure caps and British commercial arrangements. If both PAS and commercial arrangements are applied, they are classified as commercial arrangements

\*\*\*The performance-based agreements included British managed access agreement.

*a*Including nivolumab*2* (TA484) OS=2.7~3.4 months

*b*Including atezolizumab*2* (TA520) OS=*[PL1-]* 4.2 months, *[PL1+]* NS

*c*Including abiraterone*2* (TA387) ICER=£28,600~£32,800; brentuximab*1* (TA524) [population 1] ICER<£30,000, [population 2] ICER>£35,606 and [population 3] ICER= £16,000~18,000

*d* Including atezolizumab*2* (TA520) [PL1-] ICER<£50,000, [PL1+] ICER<£30,000; axitinib (TA333) ICER=£33,500~52,900; nivolumab*1* (TA483) ICER = £50,014; vemurafenib (TA269) ICER=£44,000 ~ £51,800

*e*Including carfilzomib*2* (paired to TA457 of the UK) where cost-minimization analysis was performed

The percentages are rounded up.

**Table 3. Degree of agreement in recommendation decision by country**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Identical recommendation  n=16 (28%) | | South Korea | | | | | Sub-total |
| Routine use | Simple finance-based agreement\* | Other finance-based agreement\*\* | Performance-based agreements\*\*\* | Not recommended |
| England | Routine use | 2  Bendamustine  Degarelix | 1  Cetuximab*3* |  |  | 1  Nivolumab*3* | 4 |
| Simple finance-based agreement\* | 9  Afatinib  Axitinib  Brigatinib  Cabazitaxel  Denosumab*2*  Eribulin  Lenvatinib*1*  Obinutuzumab  Ruxolitinib | 8  Carfilzomib*2*  Cetuximab*1*  Crizotinib  Enzalutamide  Lenalidomide  Palbociclib*1*  Pomalidomide  Regorafenib Hydrate | 14  Atezolizumab*1*  Atezolizumab*2*  Blinatuomab  Brentuximab*1*  Brentuximab*2*  Cabozantinib  Ceritinib  Dabrafenib  Inotuzumab Ozogamicin  Pertuzumab  Ponatinib  Trametinib  Trastuzumab Emtansine  Vemurafenib |  |  | 31 |
| Other finance-based agreement\*\* | 1  Abiraterone*1* | 1  Pembrolizumab | 2  Ibrutinib  Olaparib*1* |  | 1  Abiraterone*2* | 5 |
| Performance-based agreements\*\*\* |  | 2  Nivolumab*1*  Nivolumab*2* | 4  Daratumumab  Niraparib  Olaparib*2*  Osimertinib Mesylate |  | 1  Palbociclib*2* | 7 |
| Not recommended | 4  Aflibercept  Bevacizumab*1*  Denosumab*1*  Fulvestrant*1* | 2  Carfilzomib*1*  Ramucirumab*1* | 1  Vandetanib |  | 4  Bevacizumab*2*  Fulvestrant*2*  Lenvatinib*2*  Ramucirumab*2* | 11 |
| Sub-total | | 16 | 14 | 21 | 0 | 7 | 58 |

\*The simple finance-based agreements included Korean refund and British PAS simple discount.

\*\*The other finance-based agreements included Korean expenditure caps and British commercial arrangements.

\*\*\*The performance-based agreements included British managed access agreement.

**Table 4. Appraisal determination as a binary option (same/different) by characteristics of the underpinning evidence**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Characteristics | | Decision (2 class) | | Total  n=58 |
| Same\*  n=48 (83%) | Different  n=10 (17%) |
| Pivotal study(ies) in clinical evidence | Identical | 16 (84%) | 3 (16%) | 19 |
| Partially identical | 29 (81%) | 7 (19%) | 36 |
| Not identical | 3 (100%) | 0 (0%) | 3 |
| Committee recognized comparator(s) | Identical | 16 (89%) | 2 (11%) | 18 |
| Partially identical | 19 (86%) | 3 (14%) | 22 |
| Not identical | 13 (72%) | 5 (28%) | 18 |
| Comparator comparison | Head-to-head | 22 (81%) | 5 (19%) | 27 |
| IC only | 10 (83%) | 2 (17%) | 12 |
| Not identical | 16 (84%) | 3 (16%) | 19 |
| Overall survival | Identical | 32 (89%) | 4 (11%) | 36 |
| *improved* | *14 (93%)* | *1 (7%)* | *15* |
| *NS/none/immature* | *18 (86%)* | *3 (14%)* | *21* |
| Not identical | 16 (73%) | 6 (27%) | 22 |
| Economic evidence | Identical | 11 (92%) | 1 (8%) | 12 |
|  | *within the cost-effective range for usual condition* | *2 (100%)* | *0 (0%)* | *2* |
|  | *within the cost-effective range for special condition* | *9 (100%)* | *0 (0%)* | *9* |
|  | *above the threshold* | *0 (0%)* | *0 (0%)* | *0* |
|  | *none* | *0 (0%)* | *1 (100%)* | *1* |
|  | Not identical | 37 (80%) | 9 (20%) | 46 |

IC = indirect comparison; NS = not significant

\* 48 cases in same decisions included 44 cases which were positively recommended and 4 cases which were not recommended.

The percentages are rounded up.