**Supplemental Table 1: Disinvestment Candidates and Decisions**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Technology** | **Country** | **Targeted Population** | **Indication** | **Alternative**  | **Reason for Proposed Disinvestment** | **Decision** |
| **Medical Services or Procedures** |
| 1 | Liver biopsy | Australia | Adult men and women | Hepatitis, cirrhosis | FibroScan | Alternative with better clinical effectiveness/safety profile available Alternative with better cost-effectiveness available | Complete removal |
| 2 | Surgical removal of pacemaker leads | Australia | Adults with pacemakers | Thoracic surgery | Laser lead extraction | Alternative with better clinical effectiveness/safety profile available Alternative with better cost-effectiveness available  | Complete removal |
| 3 | Extracranial-intracranial bypass | Spain | Prevention of carotid occlusion | Stroke | Life style changes, pharmacological interventions to treat dislipemias, hypertension and cholesterol levels | Evidence/signalling of inadequate safetyEvidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | Complete removal |
| 4 | Transurethral resection of the prostate  | Australia | Men > 50 years | Benign prostatic hypertrophy | Green Light laser | Alternative with better clinical effectiveness/safety profile available Alternative with better cost-effectiveness available  | Limited use |
| 5 | Tonsillectomy | Spain | Pediatric population | Sleep apnea | - | Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | Limited use |
| 6 | Tonsillectomy | Spain | Pediatric population | Continuous infections of the respiratory tract | Watchful waiting | Evidence/signalling of inadequate safetyEvidence/suspicion of inappropriate useVariability in clinical practice | Limited use |
| 7 | Caesarean section | Spain | Pregnant women | Low risk birth delivery | Normal delivery | Evidence/signalling of inadequate safetyEvidence/suspicion of inappropriate useVariability in clinical practice | Limited use |
| 8 | Carpal tunnel release | Spain | - | Carpal tunnel syndrome | - | Evidence/signalling of inadequate safetyEvidence/suspicion of inappropriate useVariability in clinical practice | Limited use |
| 9 | Diagnostic curettage | Spain | Women without suspicion | Diagnosis of endometrial carcinoma or hyperplasia | - | Evidence/suspicion of inappropriate useLow specificity and sensitivity | Limited use |
| 10 | Routine episiotomy | Spain | Pregnant women | Normal delivery without complications | - | Evidence/signalling of inadequate safetyEvidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | Limited use |
| 11 | Mediastinoscopy | Australia | Adults requiring lung/mediastinal lymph node biopsy | Lung cancer | Endobronchial ultrasound | Alternative with better clinical effectiveness/safety profile availableAlternative with better cost-effectiveness available | Limited use  |
| 12 | Hysterectomy | Spain | Women with metrorrhagia | Heavy menstrual bleeding | endometrial ablation; levonorgestrel filled intrauterine device | Evidence/signaling of inadequate safetyEvidence/signaling of clinical ineffectivenessEvidence/suspicion of inappropriate use | Limited use |
| 13 | Knee arthroscopy for osteoarthritis | Australia | Patients with osteoarthritis of the knee | Knee arthroscopy | Pain relief and usual treatment | Evidence/signalling of clinical ineffectiveness | TBD |
| 14 | Surgical interventions for treatment of shoulder impingement | Switzerland | Patients with chronic shoulder pain due to impingement-syndrome | Surgical interventions in patients with chronic shoulder pain due to an impingement-syndrome | Watchful waiting, physiotherapy, analgesics | Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | TBD |
| 15 | Vertebroplasty/Kyphoplasty | Switzerland | Osteoporosis patients with painful osteoporotic vertebral fractures | Complete disinvestment of vertebroplasty / kyphoplasty for osteoporotic vertebral fractures | Conservative medical treatment; analgetics | Evidence/signaling of inadequate safetyEvidence/signaling of clinical ineffectivenessEvidence/suspicion of inappropriate useHigh geographic variation cost reduction  | TBD  |
| **Medical Devices** |
| 16 | Mechanical chest compression devices | United Kingdom  | - | - | - | Alternative with better clinical effectiveness/safety profile available  | Limited use |
| 17 | Antimicrobial wound dressings | Australia | All wound types | - | Non antimicrobial wound dressings; time limited use of antimicrobial dressing | Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | Limited use |
| 18 | nCPAP | Switzerland | Patients with OSAS | nCPAP treatment for mild and moderate form of OSAS ( AHI: 5 – 14.9 and 15 – 30). nCPAP treatment for the severe form of OSAS (AHI > 30) is not questioned. | Removable dental mouthpieces.  | Evidence/suspicion of inappropriate useLow patient compliance with nCPAP treatment for the mild and moderate form of OSAS which effects clinical efficacy. cost reduction | TBD |
| 19 | Test strips for SMBG | Switzerland | Non-insulin dependent T2DM patients | 400 test strips/year for SMBG in non-insulin dependent T2DM patients | Diabetes care without SMBG or diabetes care with structured SMBG with reduced amount of test strips | Evidence/suspicion of inappropriate useCost reduction if better cost-effectiveness is not shown | TBD |
| **Diagnostic Tests** |
| 20 | Vitamin D tests | Switzerland | Patients suffering from signs of diseases with a suggested link to vitamin D | Vitamin D tests for patients suffering from diseases with a suggested link to vitamin D(Currently there is no limitation) | Vitamin D supplementation without vitamin D testing; vitamin D rich diet + sun without vitamin D testing | Evidence/suspicion of inappropriate use; cost reduction | TBD |
| 21 | Vitamin B12 tests | Switzerland | Patients suffering from signs of disease with a suggested link to vitamin B12.  | Vitamin B12 tests for patients suffering from diseases with a suggested link to vitamin B12(Currently there is no limitation) | No vitamin B12 test; vitamin B12 supplementation without a test  | Evidence/suspicion of inappropriate usecost reduction | TBD |
|  |  |  |  |  |  |  |  |
| **Drug Therapies** |
| 22 | Diacerein | Spain |  | Osteoarthritis | Pain killers, platelet rich growth factors, mother cells | Evidence/signalling of inadequate safety Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | Complete removal |
| 23 | Chondroitin sulphate containing drugs | Spain |  | Osteoarthritis | Pain killers, platelet rich growth factors, mother cells | Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | Complete removal |
| Switzerland | patients with degenerative joint diseases,osteoarthritis | complete disinvestment of chondroitin sulphate containing drugs for patients with degenerative joint diseases | Standard of care (analgetics, physiotherapie) | Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | TBD |
| 24 | Olmesartan  | Switzerland | Patients with essential arterial hypertension | Essential arterial hypertension | Alternative antihypertensive drugs | Evidence/signalling of inadequate safety | TBD |
| 25 | PPI | Switzerland | a) Patients with NERD which are symptom-free after 4 - 8 weeks initial acute PPI therapy; b) Patients with non-investigated GERD (no prior endoscopic investigation) which are symptom free after 4 – 8 weeks initial acute PPI therapy | A continuous (daily) PPI long-term therapy for the mentioned indications is proposed to be limited to an on-demand PPI long-term therapy | On-demand therapy with PPIs (approx. on 30 – 50 % of the days per year), i.e. a PPI is only taken by the patient if symptoms occur | Evidence/suspicion of inappropriate useCost reduction | TBD |
| 26 | Parenteral iron substitutes | Switzerland | People with iron deficiency without anemia | Limitation of parenteral iron substitutes to patients with iron deficiency with anemia | No treatment with iron substitutes or first line oral therapy with iron substitutes with possible switch to parenteral therapy | Evidence/suspicion of inappropriate useCost reduction | TBD |

AHI = Apnea-Hypopnea-Index; GERD = gastroesophageal reflux disease; n-CPAP = nasal continuous positive airway pressure treatment; NERD = non-erosive gastroesophageal reflux disease; OSAS = obstructive sleep apnea syndrome; PPI = proton pump inhibitor; Self-monitoring of blood glucose; T2DM = type 2 diabetes mellitus; TBD = to be determined.

**Supplemental Table 2: Estimated Costs of Use and Savings per Year of Disinvestment Candidate**

Shown for health technologies and procedures with data on economic details provided by the survey respondents.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Technology** | **Country** | **Frequency of Use** | **Estimated Costs of Use per Year (Euro)** | **Estimated Cost Savings per Year (Euro)** | **Reason(s) for Proposed Disinvestment** | **Decision** |
| **Medical Services or Procedures** |
| 1 | Liver biopsy | Australia | >1,000 | > 4 m | > 2 m  | Alternative with better clinical effectiveness/safety profile available  | Complete removal |
| 2 | Surgical removal of pacemaker leads | Australia | ~50 | >10 m | > 5 m | Alternative with better clinical effectiveness/safety profile available Alternative with better cost-effectiveness available  | Complete removal |
| 3 | Transurethral resection of the prostate  | Australia | >5,000 | >10 m | > 5 m | Alternative with better clinical effectiveness/safety profile available Alternative with better cost-effectiveness available  | Limited use |
| 4 | Mediastinoscopy | Australia | >100 | >10 m | > 5 m | Alternative with better clinical effectiveness/safety profile availableAlternative with better cost-effectiveness available | Limited use  |
| 5 | Surgical interventions for treatment of shoulder impingement | Switzerland | 2,600 surgical interventions/year | 12 m | TBD | Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | TBD |
| 6 | Vertebroplasty/Kyphoplasty | Switzerland | Approx. 3000 inpatient and 300 ambulatory services per year | 25 m | TBD | Evidence/signaling of inadequate safetyEvidence/signaling of clinical ineffectivenessEvidence/suspicion of inappropriate useHigh geographic variation cost reduction is a reason  | TBD  |
| **Medical Devices** |
| 7 | nCPAP | Switzerland | 11,000 patients | 13.8 in 2015 | TBD | Evidence/suspicion of inappropriate useLow patient compliance with nCPAP treatment for the mild and moderate form of OSAS which effects clinical efficacy. cost reduction | TBD |
| 8 | Test strips for SMBG | Switzerland | 280'000 patients who use on average 200 test strips/patient/year | 45 m  | TBD | Evidence/suspicion of inappropriate useCost reduction if better cost-effectiveness is not shown | TBD |
| **Diagnostic Tests** |
| 9 | Vitamin D tests | Switzerland | 940,000 tests in 2014 versus 390 000 tests in 2011 | 43 m in 2014 | TBD | Evidence/suspicion of inappropriate use; cost reduction | TBD |
| 10 | Vitamin B12 tests | Switzerland | 970,000 tests in 2015 versus 680,000 tests in 2011 | 21.5 m in 2015  | TBD | Evidence/suspicion of inappropriate usecost reduction | TBD |
|  |  |  |  |  |  |  |  |
| **Drug Therapies** |
| 11 | Diacerein | Spain | - | 0.4 m | 0.4 m | Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | Complete removal |
| 12 | Chondroitin sulphate containing drugs | Spain | - | 4.5 m | 4.5 m | Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | Complete removal |
| Switzerland | Approx. 200'000 patients/year | 25 m  | TBD | Evidence/signalling of clinical ineffectivenessEvidence/suspicion of inappropriate use | TBD |
| 13 | Olmesartan (monotherapy or combination therapy) | Switzerland | 70,000 patients are treated continuously with Olmesartan products | 25 m  | TDB | Evidence/signalling of inadequate safety | TBD |
| 14 | PPI | Switzerland | Approx. 1 m GERD patients in Switzerland are prescribed continuous PPI therapy. It is assumed that 50 – 70 % of these patients are NERD patients, which may potentially benefit from an on-demand PPI therapy. | ~75 m – 105 m | TBD | Evidence/suspicion of inappropriate useCost reduction | TBD |
| 15 | Parenteral iron substitutes | Switzerland | 122,000 treatment cycles/year for one product alone. Other products are on the market as well | 50 m | TBD | Evidence/suspicion of inappropriate useCost reduction | TBD |

AHI = Apnea-Hypopnea-Index; GERD = gastroesophageal reflux disease; n-CPAP = nasal continuous positive airway pressure treatment; NERD = non-erosive gastroesophageal reflux disease; OSAS = obstructive sleep apnea syndrome; PPI = proton pump inhibitor; SMBG = Self-monitoring of blood glucose; T2DM = type 2 diabetes mellitus; TBD = to be determined.