**Supplementary Table 1.**

Clinical data used to inform transition probabilities for pregnancy and live birth based on Grynberg et al. 2022 and SNDS database study

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Intervention | Fresh embryo transfer only | | | Cumulative embryo transfers | |
| Pregnancy rates (%) (CI) | Live birth rates (%) (CI) | Pregnancy rates (%) (CI) | | Live birth rates (%) (CI) |
| Gonal-f | 28.00  (27.67; 28.34) | 16.65  (16.39;16.91) | 45.07  (44.67; 45.48) | | 23.60  (23.31;23.89) |
| Biosimilars | 26.60  (25.18; 28.06) | 15.15  (14.10; 16.23) | 44.62  (42.88; 46.39) | | 21.95  (20.75; 23.17) |
| Urinary gonadotropins | 26.04  (25.18; 26.92) | 15.82  (15.08; 16.40) | 38.76  (37.97; 40.02) | | 21.00  (20.28; 21.74) |

**Supplementary Table 2. Cost inputs**

|  |  |  |  |
| --- | --- | --- | --- |
| **Induction phase** |  | **Costs** | **Reference** |
| Biological tests |  | **€108.36** | NABM codes 334, 330, 472, 473, 793 |
| Serological tests |  | **€99.76** | NABM codes 388, 4501, 3784, 4500 |
| Stimulation monitoring and nurse cares |  | **€74.27** | NABM codes YYY032, AIS3 |
| Consultations |  | **€135.49** | Assurance maladie honoraires et données d'activités 07 Gynécologie obstétrique |
| **Total** |  | **€417.88** | Calculation |
|  |  |  |  |
| **Stimulation phase - Oocyte retrieval** |  |  |  |
| Monitoring, biology and ultrasound |  | **€251.72** | NABM codes 472, 473, 330, 334, 7402, CCAM code ZCQM007 |
| Oocyte maturation triggering |  | **€26.25** | BDM-IT code 3400921709476 |
| GnRH agonist / antagonist and final oocyte maturation triggering\* |  | **€228.89** | BDM-IT codes 3400932850266, 3400933943769, 34009352101, 3400935177902, 3400935530240 |
| Oocyte retrieval |  | **€847.69** | Tarif GHM 13C16J |
| Nurse care |  | **€7.95** | NGAP code AIS3 |
| **Total** |  | **€1,362.49** | Calculation |
|  |  |  |  |
| **Oocyte fertilization method** |  |  |  |
| ICSI |  | **€689.43** | NABM code 61 |
| IVF |  | **€426.70** | NABM code 60 |
| **Total (weighted)** |  | **€604.83** | Calculation (weighted by the proportions of patients with ICSI and IVF) |

|  |  |  |  |
| --- | --- | --- | --- |
| **Fresh embryo transfer** |  |  |  |
| Embryo transfer |  | **€82.48** | CCAM codes JSEC001, JSED001 |
| Concomitant medication (progesterone) |  | **€141.01** | BDM-IT codes 3400935876782, 3400932327515, 3400935876843, 3400934839962 |
| **Total** |  | **€223.49** | Calculation |
|  |  |  |  |
| **Frozen thawed embryo transfer** |  |  |  |
| Cryopreservation |  | **€50.03** | NABM code 64 |
| Storage per month |  | **€325.69** | NABM code 82 |
| Thawing & embryo transfer |  | **€117.28** | NABM code 83 |
| Frozen transfer medications |  | **€167.26** | BDM-IT code 3400921709476 |
| Consultation |  | **€67.74** | Assurance maladie honoraires et données d'activités 07 Gynécologie obstétrique |
| **Total** |  | **€737.72** | Calculation |

|  |  |  |  |
| --- | --- | --- | --- |
| **Pregnancy** |  |  |  |
| Blood test for BHCG (pregnancy test) |  | **€18.99** | NABM code 7402 |
| Follow up during pregnancy\*\* |  | **€800.19** | NABM codes 4006, 1773, 1420, 1256, CCAM codes JQQM001, JNQM001, JQQM010, JQQM018, JQQM016, ZZQX127, JJQX004, JJQX005, JQHB002, JLHA001, JKHA002, JKHA001, ZCQK002, JNQK001, Assurance maladie honoraires et données d'activités 21 Sage femme |
| **Total** |  | **€819.18** | Calculation |
|  |  |  |  |
| **No pregnancy** |  |  |  |
| Blood test for BHCG (pregnancy test) |  | **€18.99** | NABM code 7402 |
|  |  |  |  |
| **Live birth** |  |  |  |
| Live birth (weighted between single and multiple births, and natural and caesarean) |  | **€2,507.56** | Tarifs GHM codes O800, O300, O301 |
|  |  |  |  |
| **Miscarriage** |  |  |  |
| Miscarriage |  | **€1,068.18** | Tarifs GHM codes O039, O009, O0490 |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **OHSS severe** |  | **Costs** | **Reference** |
| **N981: Ovarian hyperstimulation** |  | €1,767.70 | MCO-2019 ENCC |
|  |  |  |  |

ART, Assisted reproductive technology; KOL, Key opinion leader; NABM, Nomenclature of Medical Biology Acts; CCAM, Common Classification of Medical Acts; GHM, Homogeneous Group of Patients; BDM-IT, Drug Database - Pricing Information.

Notes:

\* The cost of ‘GnRH: Final oocyte maturation triggering’ is the cost of Ovitrelle 250 μg added to a weighted average cost of a GnRH agonist and a GnRH antagonist (weighted by the proportion of patients receiving an agonist (0.77) and antagonist (0.23)).

\*\* The follow-up during pregnancy considers midwife consultations, ultrasounds, anatomopathological examinations, biopsies, radiographies, biological tests