

APPENDIX

Additional model inputs

| | Additional model inputs | | | Notes and sources |
|---|-------------------------|-------------------|-----------------------|---------------------------|
| | Rheuma- tology | Derma- tology | Gastro- enterology | |
| <i>US disease prevalence among normal population</i> | | | | |
| Rheumatology | | | | |
| Rheumatoid arthritis | 0.59% | | | Helmick 2008 (17) |
| Psoriatic arthritis | 0.25% | | | Gelfand (2005) (18) |
| Dermatology | | | | |
| Ankylosing spondylitis | | 0.35% | | Reveille (2011) (19) |
| Psoriasis | | 3.10% | | Helmick (2014) (20) |
| Psoriatic arthritis | | 0.25% | | Gelfand (2005) (18) |
| Gastroenterology | | | | |
| Crohn's disease | | | 0.24% | Kappelman (2013) (21) |
| Ulcerative colitis | | | 0.26% | Kappelman (2013) (21) |
| <i>US disease breakdown within therapeutic area</i> | | | | |
| Physician survey | | | | |
| Rheumatology | | | | |
| Rheumatoid arthritis | 69.11% | | | |
| Psoriatic arthritis | 20.91% | | | |
| Dermatology | | | | |
| Ankylosing spondylitis | | 9.98% | | |
| Psoriasis | | 79.98% | | |
| Psoriatic arthritis | | 20.02% | | |
| Gastroenterology | | | | |
| Crohn's disease | | | 48.15% | |
| Ulcerative colitis | | | 51.85% | |
| <i>Number of lab test and procedures performed during the NMS visit</i> | | | | |
| Physician survey | | | | |
| C-reactive protein (CRP) | 0.80 | 0.13 | 0.75 | |
| Erythrocyte sedimentation rate (ESR) | 0.80 | - | 0.50 | |
| Endoscopy (including colonoscopy) | - | - | 0.19 | |
| Liver function test (LFT) | 0.87 | 1.19 | 0.56 | |
| Complete blood count (CBC) | 0.93 | 1.19 | 0.81 | |
| Stool sample | - | - | 0.38 | |
| Tuberculosis Screening (PPD) | 0.40 | 0.19 | 0.19 | |
| Hepatitis B serology | 0.27 | 0.31 | 0.19 | |
| Magnetic Resonance Imaging (MRI) | 0.00 | - | - | |
| Ultrasound | 0.00 | - | - | |
| Radiograph | 0.27 | - | - | |
| <i>Number of lab test and procedures performed during follow-up</i> | | | | |
| C-reactive protein (CRP) | 1.60 | 0.13 | 1.13 | |
| Erythrocyte sedimentation rate (ESR) | 1.73 | - | 0.75 | |
| Endoscopy (including colonoscopy) | - | - | 0.38 | |
| Liver function test (LFT) | 1.67 | 1.19 | 1.00 | |
| Complete blood count (CBC) | 1.53 | 1.19 | 1.25 | |
| Stool sample | - | - | 0.63 | |
| Tuberculosis Screening (PPD) | 0.13 | 0.19 | 0.06 | |
| Hepatitis B serology | 0.13 | 0.31 | 0.06 | |
| Magnetic Resonance Imaging (MRI) | 0.00 | - | - | |
| Ultrasound | 0.13 | - | - | |
| Radiograph | 0.13 | - | - | |
| <i>Unit cost for physician time</i> | | | | |
| | | \$4.25 per minute | | 2016 physician fee |
| <i>Unit cost for lab tests</i> | | | | |
| | | | | schedule and the clinical |
| C-reactive protein (CRP) | | | \$9.53 | laboratory fee schedule |
| Erythrocyte sedimentation rate (ESR) | | | \$4.97 | published by CMS |
| Endoscopy (including colonoscopy) | | | \$424.19 | |
| Liver function test (LFT) | | | \$15.04 | |
| Complete blood count (CBC) | | | \$14.31 | |
| Stool sample | | | \$17.38 | |
| Tuberculosis Screening (PPD) | | | \$84.56 | |
| Hepatitis B serology | | | \$19.02 | |
| Magnetic Resonance Imaging (MRI) | | | \$355.36 | |
| Ultrasound | | | \$76.27 | |
| Radiograph | | | \$31.51 | |

NMS: non-medical switching.