Appendix 1: Unit costs used in the analysis

| Cost categories                  | Services or tests                                      | Units     | Unit cost ($) | Unit cost source                                                                 |
|----------------------------------|--------------------------------------------------------|-----------|---------------|----------------------------------------------------------------------------------|
| **Laboratory examinations**      |                                                        |           |               |                                                                                  |
| Hematology                       | Complete Blood Count (platelet count, hemoglobin concentration, leukocyte count) | Per test  | 3.98          | MOHLTC ScOB for Laboratory Services - CODE:L393                                  |
| Serum chemistry                  | Creatinine                                             | Per test  | 1.28          | MOHLTC ScOB for Laboratory Services - CODE: L066                                  |
|                                  | Sodium                                                 | Per test  | 1.16          | MOHLTC ScOB for Laboratory Services - CODE:L226                                    |
|                                  | Potassium                                              | Per test  | 1.16          | MOHLTC ScOB for Laboratory Services - CODE: L204                                    |
|                                  | Aspartate aminotransferase                            | Per test  | 1.28          | MOHLTC ScOB for Laboratory Services - CODE: L222                                    |
|                                  | Alanine aminotransferase                              | Per test  | 1.28          | MOHLTC ScOB for Laboratory Services - CODE: L223                                    |
|                                  | Lactate dehydrogenase                                 | Per test  | 1.28          | MOHLTC ScOB for Laboratory Services - CODE: L146                                    |
|                                  | Total bilirubin                                        | Per test  | 1.28          | MOHLTC ScOB for Laboratory Services - CODE: L030                                    |
|                                  | Albumin                                                | Per test  | 1.55          | MOHLTC ScOB for Laboratory Services - CODE: L004                                    |
| Test                                      | Type                  | Cost  | Source                                                                 |
|------------------------------------------|-----------------------|-------|------------------------------------------------------------------------|
| Activated partial thromboplastin time    | Per test              | 2.66  | MOHLTC ScOB for Laboratory Services - CODE: L462                      |
| International normalised ratio           | Per test              | 2.66  | MOHLTC ScOB for Laboratory Services - CODE: L445                      |
| Pregnancy test                           | Per test              | 2.78  | MOHLTC ScOB for Laboratory Services - CODE: L655                      |
| Examination of blood film                | Buffy coat preparation| Per test | 2.78  | MOHLTC ScOB for Laboratory Services - CODE: L374                      |
| **Medications**                          |                       |       |                                                                         |
| Eltrombopag                              | Per gram              | 2.6   | Hospital pharmacy                                                      |
| Dispensing fee                           | Per refill            | 10.11 | Personal communication - community pharmacy                            |
| Other medications                        | Variable              |       | Ontario Drug Benefit Formulary, hospital pharmacy, Web searching       |
| **Infusions**                            |                       |       |                                                                         |
| Intravenous immunoglobulin               | Nursing time          | Per hour | 40.40; Every 3.5 hours of infusion = 1 hour of nursing                |
|                                          |                       |       | Ontario Nursing Association, hourly rate ranges from $33.23 and $47.57. Average of the values was included for analysis.|
|                                          | Infusion material     | Per material | Burethrol = 3.94; Infusion Ducruet et al. (2013)                  |
| Item                                                                 | Unit       | Cost   | Source                                                                 |
|----------------------------------------------------------------------|------------|--------|------------------------------------------------------------------------|
| Tubing                                                               |            | 3.49   | Jelco per unit = 3.50                                                   |
| Physician visit                                                      | Per visit  | 85.80  | MOHLTC ScOB for Schedule of Benefits for Physician Services - CODE: A613 |
| Immunoglobulin                                                       | Per gram   | 50.84  | Canadian Blood Bank – personal communication                           |
| Preparation and dispensing by blood bank                            | Per hour   | 12.54  | Canadian Blood Bank – personal communication                           |
| **Transfusion**                                                      |            |        |                                                                        |
| Red blood cells                                                      | Per unit   | 422    | Canadian Blood Bank – personal communication                           |
| Platelets                                                            | Per unit   | 504    |                                                                        |
| Plasma                                                               | Per unit   | 449    |                                                                        |
| All blood products                                                   | Preparation and dispensing by blood bank | 12.54  | Ontariocolleges.ca/Laboratory studies                                  |
| **Diagnostic imaging**                                              |            |        |                                                                        |
| Ultrasound                                                           |            |        |                                                                        |
| Service Description                                      | Description                                      | Unit        | Cost   | Source                                                                 |
|---------------------------------------------------------|--------------------------------------------------|-------------|--------|-----------------------------------------------------------------------|
| X-ray – Thorax                                          | Two views                                       | Per test    | 26.35  | MOHLTC Schedule of Facility Fees For Independent Health Facilities – CODE:X027 |
| Computed topography – Thorax                            | With and without contrast                        | Per test    | 86.60  | MOHLTC ScOB for Schedule of Benefits for Physician Services - CODE:X125 |
| Ultrasound                                              | Peripheral vessel assessment – doppler scan or B scan, unilateral | Per test    | 22.85  | MOHLTC Schedule of Facility Fees For Independent Health Facilities – CODE:J193 |
| Hospitalizations                                        |                                                  |             |        |                                                                       |
| Unplanned admissions                                    | Emergency room visit                             | Per visit   | 148    | Canadian Institute for Health Information (2007)                      |
|                                                        | Hospital admission                               | Per day     | 842    | Home Care Ontario (2014)                                              |
| Surgery/invasive procedure                              |                                                  |             |        |                                                                       |
| Physician                                               | Per surgery/procedure                            | Variable    |        | MOHLTC ScOB for Physician Services                                    |
| Anesthetist                                             | Per unit                                        | 15.29       |        | MOHLTC ScOB for Physician Services                                    |
| Surgical assistant                                      | Per unit                                        | 12.25       |        | MOHLTC ScOB for Physician Services                                    |
| Service                          | Rate Unit     | Fee   | Source/Description                                                                 |
|---------------------------------|---------------|-------|------------------------------------------------------------------------------------|
| Operating room nurse            | Per hour      | 40.40 | Ontario Nursing Association, hourly rate ranges from $33.23 and $47.57. Average of the values was included for analysis |
|                                 | Minor procedure = 1 nurse, major procedure = 1.5 nurses |       |                                                                                   |
| Hospital admission              | Per day       | 842   | Home Care Ontario (2014)                                                          |
| Emergency room visit            | Per visit     | 239.28| Rampersaud YR et al. (2020)                                                        |

All costs are in Canadian dollars
MOHLTC, Ontario Ministry of Health and Long-Term Care; ScOB, Schedule of benefits

References for Appendix 1
1. Ontario Ministry of Health and Long-Term Care. Schedule of benefits. [http://www.health.gov.on.ca/en/pro/programs/ohip/sob/](http://www.health.gov.on.ca/en/pro/programs/ohip/sob/)
2. Ducruet T, Levasseur MC, Des Roches A, Kafal A, Dicaire R, Haddad E. Pharmacoeconomic advantages of subcutaneous versus intravenous immunoglobulin treatment in a Canadian pediatric center. Journal of allergy and clinical immunology. 2013 Feb 1;131(2):585-7.
3. Canadian Institute for Health Information, Understanding Emergency Department Wait Times: Access to Inpatient Beds and Patient Flow (Ottawa: CIHI, 2007).
4. Home Care Ontario, Facts and Figures – Publicly Funded Home Care. [https://www.homecareontario.ca/home-care-services/facts-figures/publiclyfundedhomecare](https://www.homecareontario.ca/home-care-services/facts-figures/publiclyfundedhomecare)
5. Rampersaud YR, Power JD, Perruccio AV, Paterson JM, Veillette C, Coyte PC, Badley EM, Mahomed NN. Healthcare utilization and costs for spinal conditions in Ontario, Canada-opportunities for funding high-value care: a retrospective cohort study. The Spine Journal. 2020 Jan 31.
### Appendix 2: Resources utilization and cost for the time horizon of the study

| Resource category       | Natural units | Eltrombopag (n=38) | Intravenous immunoglobulin (n=36) | Total Units used | Total cost | Total Units used | Total cost |
|-------------------------|---------------|---------------------|-----------------------------------|------------------|----------|------------------|----------|
| **Laboratory examinations** |               |                     |                                   |                  |          |                  |          |
| Hematology              |               |                     |                                   |                  |          |                  |          |
| Complete Blood Count    | per test      | 348                 | $1,385                            | 333              | $1,325   |                  |          |
| Creatinine              | per test      | 280                 | $358                              | 249              | $318     |                  |          |
| Sodium                  | per test      | 250                 | $290                              | 227              | $263     |                  |          |
| Potassium               | per test      | 250                 | $290                              | 227              | $263     |                  |          |
| Aspartate transaminase  | per test      | 241                 | $308                              | 215              | $275     |                  |          |
| Alanine aminotransferase| per test      | 254                 | $325                              | 227              | $290     |                  |          |
| Lactate dehydrogenase   | per test      | 234                 | $299                              | 219              | $280     |                  |          |
| Total bilirubin         | per test      | 279                 | $357                              | 253              | $324     |                  |          |
| Albumin                 | per test      | 248                 | $384                              | 217              | $336     |                  |          |
| Activated partial thromboplastin time | per test | 39                  | $104                              | 36               | $96      |                  |          |
| International normalised ratio | per test | 52                  | $138                              | 43               | $114     |                  |          |
| Others                  |               |                     |                                   |                  |          |                  |          |
| Pregnancy test          | per test      | 4                   | $11                               | 7                | $19      |                  |          |
| Blood film examination  | per test      | 0                   | $ -                               | 2                | $19      |                  |          |
| **Subtotal**            |               |                     |                                   |                  | $4,249   |                  | $3,922   |
| **Mean ± SD**           |               |                     |                                   |                  | $112 ± $13 |                  | $109 ± $23 |
| **Median, IQR**         |               |                     |                                   |                  | $114, 17 |                  | $117, 32 |
| **Medications**         |               |                     |                                   |                  |          |                  |          |
| Eltrombopag             |               |                     |                                   |                  |          |                  |          |
| 25mg                    | per tablet    | 75                  | $4,875                            | 0                | NA       |                  |          |
| 50mg                    | per tablet    | 743                 | $96,590                           | 0                | NA       |                  |          |
### Cost-effectiveness of eltrombopag and IVIG in ITP

|                          | 75mg  | per tablet | 330 | $64,350 | 0 | NA |
|--------------------------|-------|------------|-----|---------|---|----|
| Dispensing fee           | per dispense | 38       | $384 | 0       | NA |
| ITP-related medication   | per tablet | variable  | $446 | variable | $2,454 |
| Pre-IVIG infusion        | medication | per tablet | variable | $33 | variable | $131 |
| Subtotal                 |       |           | $166,679 | $2,585 |
| Mean ± SD                |       |           | $4,386 ± 2,357 | $72 ± 317 |
| Median, IQR              |       |           | $3,780, $2,660 | $0.60, 16 |
| IVIG infusion            |       |           |       |         |
| Nursing time             | per hour | 8.26     | $334 | 57.1    | $2,307 |
| Infusion material        | per material | 8       | $87  | 53      | $579 |
| Physician visit          | per visit | 8       | $686 | 53      | $4,547 |
| Immunoglobulin           | per gram | 575     | $29,233 | 3549 | $180,431 |
| Preparation and          | per dispense | 7      | $100 | 53      | $665 |
| dispensing fee           |       |           |       |         |
| Subtotal                 |       |           | $30,441 | $188,529 |
| Mean ± SD                |       |           | $801 ± 1,850 | $5,237 ± 2,511 |
| Median, IQR              |       |           | $0, $0 | $4,730, $3,462 |
| Transfusion (non-IVIG)   |       |           |       |         |
| Red blood cell           | per unit | 1       | $431 | 4       | $1,723 |
| Platelets                | per unit | 1       | $551 | 7       | $3,859 |
| Plasma                   | per unit | 0       | $-   | 1       | $458 |
| Preparation and          | per dispense | 2      | $49  | 9       | $219 |
| dispensing fee           |       |           |       |         |
| Subtotal                 |       |           | $1,031 | $6,259 |
| Mean ± SD                |       |           | $27 ± 117 | $174 ± 565 |
| Median, IQR              |       |           | $0, $0 | $0, $0 |
| Thrombosis investigation |       |           |       |         |
## Cost-effectiveness of eltrombopag and IVIG in ITP

### Ultrasound - DVT
| Test                                    | per test | Count | Cost per Test | Count | Total Cost |
|-----------------------------------------|----------|-------|---------------|-------|------------|
| Ultrasound - DVT                        |          | 2     | $53           | 2     | $106       |
| X-ray                                   |          | 1     | $26           | 1     | $26        |
| Computerized tomography - Chest         |          | 1     | $87           | 1     | $87        |

**Subtotal**: $166

**Mean ± SD**: $4 ± 19

**Median, IQR**: $0, $0

### Surgery

| Role                     | per surgery | Count | Cost per Surgery | Count | Total Cost |
|--------------------------|-------------|-------|------------------|-------|------------|
| Surgeon                  |             | 38    | $20,762          | 36    | $18,053    |
| Anesthetist              | per unit#   | 286   | $4,373           | 261   | $3,991     |
| Surgical assistant       | per unit#   | 233   | $2,854           | 209   | $2,560     |
| Operating room nurse     | per hour    | 46.5  | $3,006           | 42    | $2,067     |
| Hospital admission       | days        | 65.5  | $55,151          | 60.5  | $50,941    |

**Subtotal**: $86,147

**Mean ± SD**: $2,267 ± 2,622

**Median, IQR**: $1,916, $2,204

### Emergency room visits

| Test                                    | per visit | Count | Cost per Visit | Count | Total Cost |
|-----------------------------------------|-----------|-------|----------------|-------|------------|
| Emergency room visits                   |           | 2     | $479           | 1     | $239       |

**Subtotal**: $5,531

**Mean ± SD**: $146 ± $656

**Median, IQR**: $0, $0

### Unplanned hospital visits/admissions

| Test                                    | per visit | Count | Cost per Visit | Count | Total Cost |
|-----------------------------------------|-----------|-------|----------------|-------|------------|
| Hospital admission                      |           | 6     | $5,052         | 17    | $14,314    |

**Subtotal**: $5,531

**Mean ± SD**: $146 ± $656

**Median, IQR**: $0, $0

### Grand Total

| Test                                    |           |       |                |       |             |
|-----------------------------------------|-----------|-------|----------------|-------|-------------|
| Grand Total                             |           |       |                |       | $294,242    |

**Mean ± SD**: $7,743 ± 4,897

**Median, IQR**: $5,975, $5,689

### All numbers are rounded to the nearest whole number
*dispensing fee of $10.11 was included only once for the time horizon of the study
# Anesthetist and surgical assistant costs were calculated based on the time units used in the operating room multiplied by the fee per time
DVT, deep vein thrombosis; ITP, immune thrombocytopenia; IQR, interquartile range; NA, not applicable; SD, standard deviation