

Supplementary file 3

A) Overall cost of treatment with genotyping in US Dollars

| Patients | Fosaprepitant | | | | 2-Sample test | | 6-Sample test | |
|----------|---------------|--------------|--------------|-------------|---------------------------------|---------------------|---------------------------------|---------------------|
| | <i>Dose1</i> | <i>Dose2</i> | <i>Dose3</i> | <i>Cost</i> | <i>Genotyping, amortization</i> | <i>Overall Cost</i> | <i>Genotyping, amortization</i> | <i>Overall Cost</i> |
| 0 | 0 | 0 | 0 | 0 | \$7,272.97 | \$7,272.97 | \$7,272.97 | \$7,272.97 |
| 25 | 15 | 15 | 12 | \$3,421.57 | \$8,271.54 | \$11,693.11 | \$7,662.30 | \$11,083.87 |
| 50 | 29 | 30 | 25 | \$6,843.15 | \$9,270.11 | \$16,113.25 | \$8,051.62 | \$14,894.76 |
| 75 | 44 | 46 | 37 | \$10,264.72 | \$10,268.67 | \$20,533.39 | \$8,440.94 | \$18,705.66 |
| 100 | 59 | 61 | 49 | \$13,686.29 | \$11,267.24 | \$24,953.53 | \$8,830.26 | \$22,516.56 |
| 125 | 73 | 76 | 61 | \$17,107.86 | \$12,265.81 | \$29,373.67 | \$9,219.59 | \$26,327.45 |
| 150 | 88 | 91 | 74 | \$20,529.44 | \$13,264.37 | \$33,793.81 | \$9,608.91 | \$30,138.35 |
| 175 | 103 | 107 | 86 | \$23,951.01 | \$14,262.94 | \$38,213.95 | \$9,998.23 | \$33,949.24 |
| 200 | 117 | 122 | 98 | \$27,372.58 | \$15,261.51 | \$42,634.09 | \$10,387.56 | \$37,760.14 |
| 225 | 132 | 137 | 110 | \$30,794.16 | \$16,260.07 | \$47,054.23 | \$10,776.88 | \$41,571.04 |
| 250 | 147 | 152 | 123 | \$34,215.73 | \$17,258.64 | \$51,474.37 | \$11,166.20 | \$45,381.93 |
| 275 | 161 | 168 | 135 | \$37,637.30 | \$18,257.21 | \$55,894.51 | \$11,555.52 | \$49,192.83 |
| 300 | 176 | 183 | 147 | \$41,058.88 | \$19,255.77 | \$60,314.65 | \$11,944.85 | \$53,003.72 |
| 325 | 191 | 198 | 160 | \$44,480.45 | \$20,254.34 | \$64,734.79 | \$12,334.17 | \$56,814.62 |
| 350 | 205 | 213 | 172 | \$47,902.02 | \$21,252.91 | \$69,154.93 | \$12,723.49 | \$60,625.51 |
| 375 | 220 | 229 | 184 | \$51,323.59 | \$22,251.47 | \$73,575.07 | \$13,112.82 | \$64,436.41 |
| 400 | 235 | 244 | 196 | \$54,745.17 | \$23,250.04 | \$77,995.21 | \$13,502.14 | \$68,247.31 |
| 425 | 249 | 259 | 209 | \$58,166.74 | \$24,248.61 | \$82,415.35 | \$13,891.46 | \$72,058.20 |
| 450 | 264 | 274 | 221 | \$61,588.31 | \$25,247.17 | \$86,835.49 | \$14,280.78 | \$75,869.10 |
| 475 | 279 | 290 | 233 | \$65,009.89 | \$26,245.74 | \$91,255.63 | \$14,670.11 | \$79,679.99 |
| 500 | 293 | 305 | 246 | \$68,431.46 | \$27,244.31 | \$95,675.77 | \$15,059.43 | \$83,490.89 |

Formulas:

Dose 1: Patients*P1

Dose 2: Patients*P1*P3 + Patients*(1-P1)*P2*P3

Dose 3: Patients*P1*P3*P4 + Patients*(1-P1)*(1-P2)*P3*P2*P4

Cost Fosaprepitant: (Dose1 + Dose2+ Dose3)* \$ 81.08

Genotyping and amortization (2-Sample test): Patients*39.94 + \$ 7,272.97

Overall Cost (2-Sample test): Fosaprepitant + Genetic test and amortization (2-Sample test)

Genotyping and amortization (6-Sample test): Patients*15.75 + \$ 7,272.97

Overall Cost (6-Sample test): Fosaprepitant + Genetic test and amortization (6-Sample test)

B) Overall cost of standard fosaprepitant prescription

| Patients | Dose 1 | Dose 2 | Dose 3 | Fosaprepitant Cost |
|-----------------|---------------|---------------|---------------|---------------------------|
| 0 | 0 | 0 | 0 | 0 |
| 25 | 25 | 24 | 18 | \$5,380.81 |
| 50 | 50 | 47 | 35 | \$10,761.62 |
| 75 | 75 | 71 | 53 | \$16,142.44 |
| 100 | 100 | 95 | 71 | \$21,523.25 |
| 125 | 125 | 118 | 88 | \$26,904.06 |
| 150 | 150 | 142 | 106 | \$32,284.87 |
| 175 | 175 | 166 | 124 | \$37,665.69 |
| 200 | 200 | 189 | 142 | \$43,046.50 |
| 225 | 225 | 213 | 159 | \$48,427.31 |
| 250 | 250 | 237 | 177 | \$53,808.12 |
| 275 | 275 | 260 | 195 | \$59,188.93 |
| 300 | 300 | 284 | 212 | \$64,569.75 |
| 325 | 325 | 308 | 230 | \$69,950.56 |
| 350 | 350 | 331 | 248 | \$75,331.37 |
| 375 | 375 | 355 | 265 | \$80,712.18 |
| 400 | 400 | 379 | 283 | \$86,093.00 |
| 425 | 425 | 402 | 301 | \$91,473.81 |
| 450 | 450 | 426 | 319 | \$96,854.62 |
| 475 | 475 | 450 | 336 | \$102,235.43 |
| 500 | 500 | 473 | 354 | \$107,616.24 |

C) Overall cost per patient

| Patients | Fosaprepitant | | 2-Sample Analysis | | 6-Sample Analysis | |
|----------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | Mean | CI | Mean | CI | Mean | CI |
| 25 | \$156.08 | \$141.71 - 169.52 | \$486.94 | \$472.57 - 500.38 | \$462.57 | \$448.19 - 476.00 |
| 50 | \$156.08 | \$141.71 - 169.52 | \$341.48 | \$327.11 - 354.92 | \$317.11 | \$302.73 - 330.54 |
| 75 | \$156.08 | \$141.71 - 169.52 | \$293.00 | \$278.63 - 306.44 | \$268.63 | \$254.25 - 282.06 |
| 100 | \$156.08 | \$141.71 - 169.52 | \$268.75 | \$254.38 - 282.19 | \$244.38 | \$230.00 - 257.81 |
| 125 | \$156.08 | \$141.71 - 169.52 | \$254.21 | \$239.84 - 267.65 | \$229.84 | \$215.46 - 243.27 |
| 150 | \$156.08 | \$141.71 - 169.52 | \$244.51 | \$230.14 - 257.95 | \$220.14 | \$205.76 - 233.57 |
| 175 | \$156.08 | \$141.71 - 169.52 | \$237.58 | \$223.21 - 251.02 | \$213.21 | \$198.83 - 226.64 |
| 200 | \$156.08 | \$141.71 - 169.52 | \$232.39 | \$218.02 - 245.83 | \$208.02 | \$193.64 - 221.45 |
| 225 | \$156.08 | \$141.71 - 169.52 | \$228.35 | \$213.98 - 241.79 | \$203.98 | \$189.60 - 217.41 |
| 250 | \$156.08 | \$141.71 - 169.52 | \$225.12 | \$210.74 - 238.55 | \$200.75 | \$186.37 - 214.18 |
| 275 | \$156.08 | \$141.71 - 169.52 | \$222.47 | \$208.10 - 235.91 | \$198.10 | \$183.72 - 211.53 |
| 300 | \$156.08 | \$141.71 - 169.52 | \$220.27 | \$205.90 - 233.71 | \$195.90 | \$181.52 - 209.33 |
| 325 | \$156.08 | \$141.71 - 169.52 | \$218.40 | \$204.03 - 231.84 | \$194.03 | \$179.65 - 207.46 |
| 350 | \$156.08 | \$141.71 - 169.52 | \$216.80 | \$202.43 - 230.24 | \$192.43 | \$178.05 - 205.86 |
| 375 | \$156.08 | \$141.71 - 169.52 | \$215.42 | \$201.05 - 228.86 | \$191.05 | \$176.67 - 204.48 |
| 400 | \$156.08 | \$141.71 - 169.52 | \$214.21 | \$199.84 - 227.65 | \$189.84 | \$175.46 - 203.27 |
| 425 | \$156.08 | \$141.71 - 169.52 | \$213.14 | \$198.77 - 226.58 | \$188.77 | \$174.39 - 202.20 |
| 450 | \$156.08 | \$141.71 - 169.52 | \$212.19 | \$197.81 - 225.62 | \$187.82 | \$173.44 - 201.25 |
| 475 | \$156.08 | \$141.71 - 169.52 | \$211.34 | \$196.96 - 224.77 | \$186.97 | \$172.59 - 200.40 |
| 500 | \$156.08 | \$141.71 - 169.52 | \$210.57 | \$196.20 - 224.01 | \$186.20 | \$171.82 - 199.63 |

*Considering only the patients that conclude the entire treatment (3 cycles of chemotherapy)

Overall cost per patient (2-Sample analysis), corresponding to: (1) the cost of Fosaprepitant; (2) the amortization cost per test, calculated by dividing the annual amortization cost by the initial number of patients; (3) the test costs concerning manpower and reagents (\$ 39.94 per test).

Overall cost per patient (6-Sample analysis), corresponding to: (1) the cost of Fosaprepitant; (2) the amortization cost per test, calculated by dividing the annual amortization cost by the initial number of patients; (3) the test costs concerning manpower and reagents (\$ 15.75 per test).