Supplementary Material

Performance evaluation of the Glunovo® Continuous Blood Glucose Monitoring System in Chinese Participants with Diabetes: A multi-center, self-controlled trial

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**Supplementary Table 1.** Repeatability of sensors

| Venous blood glucose concentration (mmol/L) | Left abdominal CGMS to right abdominal CGMS | Absolute difference between pairs (PAD, mmol/L) | Absolute relative difference in pairs (PARD, %) |
|-------------------------------------------|---------------------------------------------|-----------------------------------------------|-----------------------------------------------|
|                                           |                                              | Mean±SD Median (Q1, Q3) Min, Max 95% CI       | Mean±SD Median (Q1, Q3) Min, Max 95% CI       |
| (2.22, 3.33)                              | 21                                          | 0.15±0.11 0.13 (0.07, 0.19) 0.02, 0.45 0.10, 0.20 | 4.67±4.21 3.50 (1.65, 6.38) 0.63, 18.56 2.76, 6.59 |
| (3.33, 4.44)                              | 206                                         | 0.24±0.23 0.17 (0.09, 0.31) 0.00, 1.08 0.21, 0.27 | 5.17±5.33 3.51 (1.82, 6.54) 0.00, 36.13 4.44, 5.91 |
| (4.44, 6.67)                              | 1364                                        | 0.34±0.51 0.21 (0.10, 0.42) 0.00, 9.69 0.32, 0.37 | 5.76±7.36 3.43 (1.62, 7.15) 0.00, 96.98 5.37, 6.15 |
| (6.67, 8.89)                              | 1854                                        | 0.45±0.57 0.28 (0.12, 0.53) 0.00, 4.79 0.42, 0.47 | 6.02±8.53 3.64 (1.59, 6.98) 0.00, 93.66 5.64, 6.41 |
| (8.89, 11.11)                             | 1379                                        | 0.60±0.78 0.38 (0.15, 0.71) 0.00, 7.43 0.56, 0.64 | 6.52±9.83 4.03 (1.59, 7.52) 0.00, 125.61 6.00, 7.04 |
| (11.11, 13.89)                            | 1018                                        | 0.69±0.72 0.48 (0.23, 0.90) 0.00, 6.16 0.64, 0.73 | 5.99±6.65 4.38 (1.98, 7.92) 0.00, 115.36 5.58, 6.40 |
| (13.89, 16.67)                            | 254                                         | 0.84±0.91 0.52 (0.24, 1.10) 0.00, 5.45 0.73, 0.95 | 5.92±6.13 3.75 (1.72, 7.71) 0.00, 32.90 5.17, 6.68 |
| (16.67, 19.44)                            | 104                                         | 0.79±0.63 0.61 (0.32, 1.13) 0.01, 2.29 0.67, 0.91 | 5.00±3.98 3.65 (2.00, 7.38) 0.06, 15.07 4.22, 5.77 |
| (19.44, 22.22)                            | 14                                          | 1.48±0.75 1.74 (0.77, 2.08) 0.18, 2.31 1.05, 1.92 | 8.76±4.66 10.29 (4.61, 12.40) 1.02, 14.62 6.07, 11.45 |
| >22.22                                    | 4                                           | 0.53±0.36 0.59 (0.31, 0.75) 0.04, 0.90 -0.04, 1.10 | 2.64±1.77 2.96 (1.49, 3.78) 0.19, 4.42 -0.19, 5.46 |
| **Total**                                 | 6218                                        | 0.51±0.67 0.31 (0.13, 0.63) 0.00, 9.69 0.50, 0.53 | 6.02±8.08 3.77 (1.68, 7.35) 0.00, 125.61 5.82, 6.22 |

CGMS, continuous glucose monitoring system
**Supplementary Table 2. Instrument operation score**

| S. No. | Question                                                                 | Dissatisfaction, n (%) | General, n (%) | Satisfaction, n (%) | Total, n (%) |
|--------|---------------------------------------------------------------------------|------------------------|----------------|---------------------|--------------|
| 1      | Fluency during sensor implantation                                        | 0 (0.00)               | 1 (1.28)       | 77 (98.72)          | 78 (100.00)  |
| 2      | Smooth removal of implant                                                 | 0 (0.00)               | 0 (0.00)       | 78 (100.00)          | 78 (100.00)  |
| 3      | Fluency of pulling implant from sensor base                              | 0 (0.00)               | 0 (0.00)       | 78 (100.00)          | 78 (100.00)  |
| 4      | Easy operation of transmitter fixed to sensor base                       | 0 (0.00)               | 0 (0.00)       | 78 (100.00)          | 78 (100.00)  |
| 5      | Friendliness of APP operation interface                                  | 0 (0.00)               | 7 (8.97)       | 71 (91.03)           | 78 (100.00)  |
| 6      | Comprehensive app function                                                | 0 (0.00)               | 18 (23.08)     | 60 (76.92)           | 78 (100.00)  |
| 7      | Stability of app working state                                           | 0 (0.00)               | 18 (23.08)     | 60 (76.92)           | 78 (100.00)  |
| 8      | Convenience of removing the sensor after monitoring                     | 0 (0.00)               | 6 (7.69)       | 72 (92.31)           | 78 (100.00)  |
| 9      | Analysis of software comprehensiveness                                   | 0 (0.00)               | 12 (15.38)     | 66 (84.62)           | 78 (100.00)  |
| 10     | Subjects’ feedback on somatosensory comfort during sensor implantation    | 0 (0.00)               | 14 (17.95)     | 64 (82.05)           | 78 (100.00)  |
| 11     | During the monitoring process, the subjects’ feedback on body comfort     | 0 (0.00)               | 8 (10.26)      | 70 (89.74)           | 78 (100.00)  |
| 12     | Subjects’ feedback on somatosensory comfort during sensor removal         | 0 (0.00)               | 7 (8.97)       | 71 (91.03)           | 78 (100.00)  |
Supplementary Figure 1. Flow chart of subjects included

Excluded (n=9)
- Implant failure (n=1)
- Subject's strenuous exercise resulted in transducer probe displacement (n=1)
- Hyperglycemic overdose causes device to stop working (n=2)
- App data missing due to device failure (n=2)
- Transmitter battery depletion causes device to stop working (n=1)
- Subjects with AE required abdominal CT (n=2)
- 154 sensors included for efficacy evaluation

Total, N=85

CGMS (n=156; 2 devices/patient)

Study completion (n=147)

Total number of sensors/manual readings included (n=225)

Control (n=78)

Excluded (n=7)
- Does not meet inclusion criteria (n=4)
- No informed consent (n=1)
- Spontaneous withdrawal (n=2)