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Supplementary Table 1: Results of quality assessment of the included studies.

| Cochrane - Risk of bias assessment | Random Sequence Generation | Allocation Concealment | Blinding of Participants and Personnel | Blinding of Outcome Assessment | Incomplete Outcome Data | Selective Reporting | Other Bias | Overall Bias |
|------------------------------------|----------------------------|------------------------|----------------------------------------|--------------------------------|-------------------------|---------------------|------------|--------------|
| Ahmed2023                          | Low                        | Low                    | Unknown                                | Unknown                        | Low                     | Low                 | Low        | Unknown      |
| Arora2011                          | Low                        | Low                    | Unknown                                | High                           | Low                     | Low                 | Low        | High         |
| Bartl2014                          | Low                        | Unknown                | Unknown                                | Unknown                        | Low                     | Unknown             | Unknown    | High         |
| Chung2020                          | Low                        | Low                    | High                                   | High                           | Low                     | Low                 | Unknown    | High         |
| Drobetz2016                        | Low                        | Low                    | Unknown                                | Unknown                        | Low                     | Low                 | Unknown    | Unknown      |
| Lawson2021                         | Low                        | Low                    | High                                   | High                           | Low                     | Unknown             | Unknown    | High         |
| Martinez-Mendez2017                | Low                        | Low                    | Unknown                                | Unknown                        | Low                     | Unknown             | Low        | Unknown      |
| Mulders2019                        | Low                        | Low                    | High                                   | High                           | Low                     | Low                 | Unknown    | High         |
| Saving2019                         | Low                        | Low                    | High                                   | High                           | Low                     | Low                 | Unknown    | High         |
| Selles2021                         | Low                        | Low                    | Unknown                                | Unknown                        | Low                     | Low                 | Unknown    | Unknown      |
| Shaikh2023                         | Low                        | Unknown                | Unknown                                | Unknown                        | Unknown                 | Unknown             | Low        | High         |
| Sharma2014                         | Low                        | Unknown                | Unknown                                | Unknown                        | Unknown                 | Unknown             | Unknown    | High         |
| Südow2022                          | Low                        | Low                    | High                                   | High                           | Low                     | Low                 | Unknown    | High         |
| Thorninger2022                     | Low                        | Low                    | Unknown                                | Unknown                        | Low                     | Low                 | Low        | Unknown      |

Supplementary Table 2: Subgroup analysis results of wrist functional outcomes.

| Outcomes       | Number of Study | SMD   | 95% CI      | P-value | I <sup>2</sup> (%) |
|----------------|-----------------|-------|-------------|---------|--------------------|
| Extension (°)  |                 |       |             |         |                    |
| <60 years      |                 |       |             |         |                    |
| 6-week         | 3               | 4.32  | 2.88, 5.75  | <0.001  | 89.4               |
| 3-month        | 2               | 1.95  | 1.48, 2.42  | <0.001  | 40.8               |
| 6-month        | 2               | 1.17  | -1.13, 3.47 | 0.320   | 97.8               |
| 12-month       | 3               | 1.23  | -1.09, 3.56 | 0.298   | 98.2               |
| > 12-month     | 1               | 4.71  | 3.75, 5.67  | <0.001  | -                  |
| ≥60 years      |                 |       |             |         |                    |
| 6-week         | 1               | 0.07  | -0.39, 0.53 | 0.776   | -                  |
| 3-month        | 3               | -0.04 | -0.20, 0.12 | 0.621   | 20.1               |
| 6-month        | 2               | 0.01  | -0.11, 0.12 | 0.897   | 0                  |
| 12-month       | 4               | 0.01  | -0.10, 0.12 | 0.829   | 0                  |
| > 12-month     | 3               | -0.29 | -1.00, 0.42 | 0.421   | 86.0               |
| Flexion (°)    |                 |       |             |         |                    |
| <60 years      |                 |       |             |         |                    |
| 6-week         | 3               | 2.42  | 0.94, 3.91  | 0.001   | 94.8               |
| 3-month        | 2               | 1.58  | 0.86, 2.29  | <0.001  | 77.6               |
| 6-month        | 1               | 1.40  | 0.93, 1.86  | <0.001  | -                  |
| 12-month       | 3               | 1.84  | 1.22, 2.46  | <0.001  | 75.9               |
| > 12-month     | 1               | 3.13  | 2.40, 3.87  | <0.001  | -                  |
| ≥60 years      |                 |       |             |         |                    |
| 6-week         | 1               | 0.23  | -0.21, 0.71 | 0.289   | -                  |
| 3-month        | 3               | 0.18  | -0.31, 0.67 | 0.466   | 86.8               |
| 6-month        | 3               | 0.75  | -0.31, 1.81 | 0.168   | 96.2               |
| 12-month       | 4               | 0.39  | -0.12, 0.89 | 0.134   | 89.8               |
| > 12-month     | 3               | 0.27  | -0.51, 1.05 | 0.500   | 88.5               |
| Supination (°) |                 |       |             |         |                    |
| <60 years      |                 |       |             |         |                    |
| 6-week         | 2               | 2.87  | 0.38, 5.35  | 0.024   | 97.8               |
| 3-month        | 1               | 2.15  | 0.44, 3.85  | 0.013   | 95.0               |
| 6-month        | 1               | 2.20  | -1.15, 5.55 | 0.199   | 98.5               |
| 12-month       | 2               | 1.56  | 0.34, 2.79  | 0.012   | 94.1               |
| > 12-month     | 1               | 0.39  | -0.10, 0.89 | 0.120   | -                  |
| ≥60 years      |                 |       |             |         |                    |
| 6-week         | 1               | 0.12  | -0.34, 0.58 | 0.616   | -                  |
| 3-month        | 3               | 0.06  | -0.13, 0.24 | 0.545   | 28.5               |
| 6-month        | 2               | 0.10  | -0.31, 0.51 | 0.653   | 69.7               |
| 12-month       | 4               | 0.21  | -0.14, 0.55 | 0.246   | 78.9               |
| > 12-month     | 3               | 0.76  | 0.50, 1.03  | <0.001  | 0                  |
| Pronation (°)  |                 |       |             |         |                    |
| <60 years      |                 |       |             |         |                    |
| 6-week         | 3               | 1.81  | 0.37, 3.25  | 0.014   | 95.4               |

|                      |   |       |              |        |      |
|----------------------|---|-------|--------------|--------|------|
| 3-month              | 2 | 0.28  | -0.27, 0.83  | 0.321  | 71.2 |
| 6-month              | 2 | 0.87  | -0.84, 2.57  | 0.320  | 96.5 |
| 12-month             | 3 | 0.73  | -0.11, 1.57  | 0.090  | 90.0 |
| > 12-month           | 1 | 0.77  | 0.26, 1.28   | 0.003  | -    |
| ≥60 years            |   |       |              |        |      |
| 6-week               | 1 | 0.31  | -0.15, 0.77  | 0.192  | -    |
| 3-month              | 3 | 0.12  | -0.12, 0.37  | 0.318  | 50.7 |
| 6-month              | 2 | 0.07  | -0.55, 0.18  | 0.267  | 0    |
| 12-month             | 4 | 0.16  | -0.16, 0.49  | 0.316  | 75.5 |
| > 12-month           | 3 | 0.47  | 0.05, 0.89   | 0.027  | 60.1 |
| Ulnar deviation (°)  |   |       |              |        |      |
| <60 years            |   |       |              |        |      |
| 6-week               | 3 | 3.10  | 0.88, 5.31   | 0.006  | 97.2 |
| 3-month              | 2 | 0.99  | -0.96, 2.95  | 0.320  | 97.2 |
| 6-month              | 2 | 0.00  | -0.29, 0.27  | 1.000  | 0    |
| 12-month             | 3 | 1.04  | -0.56, 2.64  | 0.202  | 96.8 |
| > 12-month           | 1 | 3.13  | 2.39, 3.87   | <0.001 | -    |
| ≥60 years            |   |       |              |        |      |
| 6-week               | 1 | 0.00  | -0.46, 0.46  | 1.000  | -    |
| 3-month              | 2 | 0.17  | -0.11, 0.45  | 0.233  | 0    |
| 6-month              | 1 | 0.32  | -0.15, 0.78  | 0.181  | -    |
| 12-month             | 3 | 0.27  | -0.04, 0.59  | 0.092  | 25.8 |
| > 12-month           | 2 | 0.30  | -0.21, 0.80  | 0.251  | 52.9 |
| Radial deviation (°) |   |       |              |        |      |
| <60 years            |   |       |              |        |      |
| 6-week               | 3 | 2.72  | 1.55, 3.90   | <0.001 | 90.9 |
| 3-month              | 2 | 2.24  | 1.35, 3.14   | <0.001 | 82.0 |
| 6-month              | 2 | 0.00  | -0.29, 0.29  | 1.000  | 0    |
| 12-month             | 3 | 0.81  | -0.53, 2.16  | 0.235  | 95.7 |
| > 12-month           | 1 | -0.22 | -0.79, 0.34  | 0.438  | -    |
| ≥60 years            |   |       |              |        |      |
| 6-week               | 1 | -0.13 | -0.58, 0.33  | 0.594  | -    |
| 3-month              | 2 | 0.11  | -0.17, 0.39  | 0.433  | 0    |
| 6-month              | 1 | -0.10 | -0.56, 0.36  | 0.665  | -    |
| 12-month             | 3 | -0.53 | -1.24, 0.18  | 0.143  | 88.3 |
| > 12-month           | 2 | -0.49 | -0.92, -0.06 | 0.026  | 35.8 |
| Grip strength (kg)   |   |       |              |        |      |
| <60 years            |   |       |              |        |      |
| 6-week               | 2 | 4.66  | 3.56, 5.76   | <0.001 | 72.7 |
| 3-month              | 2 | 2.52  | 1.54, 3.49   | <0.001 | 83.4 |
| 6-month              | 2 | 2.31  | 1.44, 3.18   | <0.001 | 80.5 |
| 12-month             | 2 | 1.14  | -0.32, 2.60  | 0.127  | 95.0 |
| > 12-month           | - | -     | -            | -      | -    |
| ≥60 years            |   |       |              |        |      |

|            |   |      |             |       |   |
|------------|---|------|-------------|-------|---|
| 6-week     | 1 | 0.61 | 0.14, 1.08  | 0.011 | - |
| 3-month    | 1 | 0.60 | 0.13, 1.07  | 0.013 | - |
| 6-month    | 1 | 0.56 | 0.10, 1.03  | 0.018 | - |
| 12-month   | 2 | 0.47 | 0.16, 0.79  | 0.003 | 0 |
| > 12-month | 1 | 0.40 | -0.03, 0.83 | 0.067 | - |

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SMD, standardized mean difference; CI, confidence interval.

Supplementary Table 3: Subgroup analysis results of radiological outcomes.

| Outcomes               | Number of Study | SMD   | 95% CI      | P-value | I <sup>2</sup> (%) |
|------------------------|-----------------|-------|-------------|---------|--------------------|
| Volar Tilt (°)         |                 |       |             |         |                    |
| <60 years              |                 |       |             |         |                    |
| Postoperative          | 1               | 1.51  | 0.95, 2.07  | <0.001  | -                  |
| 6-week                 | -               | -     | -           | -       | -                  |
| 3-month                | -               | -     | -           | -       | -                  |
| 6-month                | -               | -     | -           | -       | -                  |
| 12-month               | 1               | 3.95  | 3.10, 4.80  | <0.001  | -                  |
| > 12-month             | 1               | 3.95  | 3.10, 4.80  | <0.001  | -                  |
| ≥60 years              |                 |       |             |         |                    |
| Postoperative          | 1               | 0.77  | 0.30, 1.25  | 0.001   | -                  |
| 6-week                 | -               | -     | -           | -       | -                  |
| 3-month                | 4               | 0.66  | 0.08, 1.25  | 0.025   | 93.4               |
| 6-month                | -               | -     | -           | -       | -                  |
| 12-month               | 3               | 0.19  | -0.21, 0.59 | 0.347   | 88.9               |
| > 12-month             | 1               | 0.50  | 0.10, 0.90  | 0.015   | -                  |
| Radial inclination (°) |                 |       |             |         |                    |
| <60 years              |                 |       |             |         |                    |
| Postoperative          | 1               | 2.14  | 1.53, 2.76  | <0.001  | -                  |
| 6-week                 | 1               | 3.05  | 2.33, 3.78  | <0.001  | -                  |
| 3-month                | -               | -     | -           | -       | -                  |
| 6-month                | -               | -     | -           | -       | -                  |
| 12-month               | 1               | 3.40  | 2.62, 4.17  | <0.001  | -                  |
| > 12-month             | 1               | 3.40  | 2.62, 4.17  | <0.001  | -                  |
| ≥60 years              |                 |       |             |         |                    |
| Postoperative          | 3               | 0.17  | -0.08, 0.43 | 0.173   | 31.1               |
| 6-week                 | 1               | 0.74  | 0.51, 1.17  | <0.001  | -                  |
| 3-month                | 4               | 0.74  | 0.00, 1.48  | 0.049   | 97.3               |
| 6-month                | -               | -     | -           | -       | -                  |
| 12-month               | 5               | 0.79  | 0.09, 1.50  | 0.028   | 96.9               |
| > 12-month             | 2               | 1.00  | 0.66, 1.35  | <0.001  | 0                  |
| Radial height (mm)     |                 |       |             |         |                    |
| <60 years              |                 |       |             |         |                    |
| Postoperative          | 1               | 1.47  | 0.91, 2.02  | <0.001  | -                  |
| 6-week                 | 1               | 2.01  | 1.41, 2.61  | <0.001  | -                  |
| 3-month                | -               | -     | -           | -       | -                  |
| 6-month                | -               | -     | -           | -       | -                  |
| 12-month               | 1               | 2.31  | 1.67, 2.95  | <0.001  | -                  |
| > 12-month             | 1               | 2.31  | 1.67, 2.95  | <0.001  | -                  |
| ≥60 years              |                 |       |             |         |                    |
| Postoperative          | -               | -     | -           | -       | -                  |
| 6-week                 | -               | -     | -           | -       | -                  |
| 3-month                | 2               | -0.09 | -0.22, 0.03 | 0.122   | 0                  |

|                     |   |       |              |        |      |
|---------------------|---|-------|--------------|--------|------|
| 6-month             | - | -     | -            | -      | -    |
| 12-month            | 3 | 0.26  | -0.24, 0.76  | 0.303  | 93.3 |
| > 12-month          | 1 | 1.58  | 1.12, 2.04   | <0.001 | -    |
| Ulnar variance (mm) |   |       |              |        |      |
| <60 years           |   |       |              |        |      |
| Postoperative       | 1 | -2.46 | -3.12, -1.81 | <0.001 | -    |
| 6-week              | 1 | -3.21 | -3.96, -2.46 | <0.001 | -    |
| 3-month             | - | -     | -            | -      | -    |
| 6-month             | - | -     | -            | -      | -    |
| 12-month            | 1 | -3.45 | -4.23, -2.67 | <0.001 | -    |
| > 12-month          | 1 | -3.45 | -4.23, -2.67 | <0.001 | -    |
| ≥60 years           |   |       |              |        |      |
| Postoperative       | 1 | -0.12 | -0.58, 0.34  | 0.605  | -    |
| 6-week              | - | -     | -            | -      | -    |
| 3-month             | 2 | -0.89 | -1.02, -0.76 | <0.001 | 0    |
| 6-month             | - | -     | -            | -      | -    |
| 12-month            | 4 | -0.88 | -1.07, -0.70 | <0.001 | 45.2 |
| > 12-month          | 2 | 0.05  | -2.18, 2.27  | 0.968  | 97.2 |

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SMD, standardized mean difference; CI, confidence interval.