

## Summary statistics - quantitative results

(Groups: manufacturer of kit)

Filter: minimal size of the groups n = 5

## EQA round: BM2/21 - Bone Markers

Deadline: 29.10.2021

|  |  |  |
|--|--|--|
| RoM = robust average                                 | AV = assigned value  | Dmax = acceptable percent difference     |
| SD = standard deviation                              | CRV = certified reference value                                      | LL = lower limit                         |
| CV = coefficient of variation                        | RV = reference value   | UL = upper limit                         |
| Ntot = total number of the participants              | CVE = consensus value from experts                                   | Neva = number of evaluated participants  |
| Nout = number of results excluded before calculation | CVP = consensus value from all participants                          | Nsuc = number of successful participants |
|  | CVPG = consensus value from participants groups                      | Srel = success (relative)                |
|  | U <sub>AV</sub> = expanded uncertainty of the assigned value (k = 2) |  |

| Test  | [unit]   |      |      |        |                  |                  | Comparability |                      |                  |     |      |                  |                  |                  |
|---|----------|------|------|--------|------------------|------------------|---------------|----------------------|------------------|-----|------|------------------|------------------|------------------|
|   |          | RoM  | SD   | CV [%] | N <sub>tot</sub> | N <sub>out</sub> | AV            | U <sub>AV</sub>      | D <sub>max</sub> | LL  | UL   | N <sub>eva</sub> | N <sub>suc</sub> | S <sub>rel</sub> |
| <b>(431) Parathyroid hormone (PTH)</b>      |          |      |      |        | 89               |                  |               |                      |                  |     |      | 85               | 82               | 96%              |
| — Samples and groups                        | [pmol/L] |      |      |        |                  |                  |               |                      |                  |     |      |                  |                  |                  |
| <b>Sample A</b>                             |          | 20,4 | 4,4  | 22     | 89               |                  |               |                      |                  |     |      | 85               | 83               | 98%              |
| (1) Abbott                                  |          | 36,8 | 4,2  | 11     | 17               | 0                | CVPG          | 36,8                 | 2,5              | 23% | 28,3 | 45,3             | 17               |                  |
| (12) Beckman Coulter                        |          | 15,8 | 1,4  | 8,9    | 12               | 0                | CVPG          | 15,8                 | 0,99             | 23% | 12,1 | 19,5             | 12               |                  |
| (60) Roche                                  |          | 19,0 | 1,1  | 5,9    | 38               | 0                | CVPG          | 19,0                 | 0,44             | 23% | 14,6 | 23,4             | 38               |                  |
| (162) Siemens (Atellica)                    |          | 21,0 | 0,71 | 3,4    | 6                | 0                | CVPG          | 21,0                 | 0,99             | 23% | 16,1 | 25,9             | 6                |                  |
| (179) Siemens                               |          | 21,4 | 1,4  | 6,5    | 12               | 0                | CVPG          | 21,4                 | 0,98             | 23% | 16,4 | 26,4             | 12               |                  |
| Other                                       |          |      |      |        | 4                | 0                |               |                      |                  |     |      |                  | 0                |                  |
|   |          |      |      |        |                  |                  |               | 1x 25, 2x 29, 1x 183 |                  |     |      |                  |                  |                  |
| <b>Sample B</b>                             |          | 7,02 | 1,9  | 27     | 89               |                  |               |                      |                  |     |      | 85               | 82               | 96%              |
| (1) Abbott                                  |          | 13,0 | 1,4  | 11     | 17               | 0                | CVPG          | 13,0                 | 0,82             | 23% | 10   | 16               | 17               |                  |
| (12) Beckman Coulter                        |          | 5,00 | 0,32 | 6,5    | 12               | 0                | CVPG          | 5,00                 | 0,23             | 23% | 3,85 | 6,15             | 12               |                  |
| (60) Roche                                  |          | 6,22 | 0,47 | 7,6    | 38               | 0                | CVPG          | 6,22                 | 0,19             | 23% | 4,78 | 7,66             | 38               |                  |
| (162) Siemens (Atellica)                    |          | 7,44 | 0,36 | 4,8    | 6                | 0                | CVPG          | 7,44                 | 0,50             | 23% | 5,72 | 9,16             | 6                |                  |
| (179) Siemens                               |          | 7,47 | 0,33 | 4,4    | 12               | 0                | CVPG          | 7,47                 | 0,23             | 23% | 5,75 | 9,19             | 12               |                  |
| Other                                       |          |      |      |        | 4                | 1                |               |                      |                  |     |      |                  | 0                |                  |
|   |          |      |      |        |                  |                  |               | 1x 25, 2x 29, 1x 183 |                  |     |      |                  |                  |                  |
| <b>(436) Parathyroid hormone (PTH 1-84)</b> |          |      |      |        | 45               |                  |               |                      |                  |     |      | 45               | 45               | 100%             |
| — Samples and groups                        | [pmol/L] |      |      |        |                  |                  |               |                      |                  |     |      |                  |                  |                  |
| <b>Sample A</b>                             |          | 13,2 | 0,94 | 7,1    | 45               |                  |               |                      |                  |     |      | 45               | 45               | 100%             |
| (60) Roche                                  |          | 13,4 | 0,87 | 6,5    | 37               | 0                | CVPG          | 13,4                 | 0,35             | 17% | 11,1 | 15,7             | 37               |                  |
| (164) DiaSorin                              |          | 12,1 | 1,4  | 11     | 8                | 0                | CVPG          | 12,1                 | 1,0              | 17% | 10   | 14,2             | 8                |                  |
| <b>Sample B</b>                             |          | 4,46 | 0,49 | 11     | 45               |                  |               |                      |                  |     |      | 45               | 45               | 100%             |
| (60) Roche                                  |          | 4,61 | 0,32 | 6,9    | 37               | 0                | CVPG          | 4,61                 | 0,13             | 17% | 3,82 | 5,4              | 37               |                  |
| (164) DiaSorin                              |          | 3,50 | 0,21 | 5,9    | 8                | 0                | CVPG          | 3,50                 | 0,16             | 17% | 2,9  | 4,1              | 8                |                  |
| <b>(432) Collagen telopeptide CTx-beta</b>  |          |      |      |        | 88               |                  |               |                      |                  |     |      | 86               | 84               | 98%              |
| — Samples and groups                        | [ng/L]   |      |      |        |                  |                  |               |                      |                  |     |      |                  |                  |                  |
| <b>Sample A</b>                             |          | 673  | 45   | 6,7    | 88               |                  |               |                      |                  |     |      | 86               | 84               | 98%              |
| (60) Roche                                  |          | 675  | 44   | 6,5    | 86               | 0                | CVPG          | 675                  | 12               | 17% | 560  | 790              | 86               |                  |
| Other                                       |          |      |      |        | 2                | 0                |               |                      |                  |     |      |                  | 0                |                  |
|   |          |      |      |        |                  |                  |               | 2x 183               |                  |     |      |                  |                  |                  |
| <b>Sample B</b>                             |          | 291  | 18   | 6,2    | 88               |                  |               |                      |                  |     |      | 86               | 84               | 98%              |
| (60) Roche                                  |          | 292  | 18   | 6,1    | 86               | 0                | CVPG          | 292                  | 4,7              | 17% | 242  | 342              | 86               |                  |
| Other                                       |          |      |      |        | 2                | 1                |               |                      |                  |     |      |                  | 0                |                  |
|   |          |      |      |        |                  |                  |               | 2x 183               |                  |     |      |                  |                  |                  |
| <b>(433) P1NP</b>                           |          |      |      |        | 69               |                  |               |                      |                  |     |      | 68               | 66               | 97%              |
| — Samples and groups                        | [µg/L]   |      |      |        |                  |                  |               |                      |                  |     |      |                  |                  |                  |
| <b>Sample A</b>                             |          | 200  | 15   | 7,4    | 69               |                  |               |                      |                  |     |      | 68               | 66               | 97%              |
| (60) Roche                                  |          | 200  | 15   | 7,2    | 68               | 0                | CVPG          | 200                  | 4,3              | 20% | 160  | 240              | 68               |                  |
| Other                                       |          |      |      |        | 1                | 0                |               |                      |                  |     |      |                  | 0                |                  |
|   |          |      |      |        |                  |                  |               | 1x 183               |                  |     |      |                  |                  |                  |
| <b>Sample B</b>                             |          | 30,3 | 2,3  | 7,5    | 69               |                  |               |                      |                  |     |      | 68               | 67               | 99%              |
| (60) Roche                                  |          | 30,4 | 2,2  | 7,4    | 68               | 0                | CVPG          | 30,4                 | 0,66             | 20% | 24,3 | 36,5             | 68               |                  |
| Other                                       |          |      |      |        | 1                | 0                |               |                      |                  |     |      |                  | 0                |                  |
|   |          |      |      |        |                  |                  |               | 1x 183               |                  |     |      |                  |                  |                  |
| <b>(434) Osteocalcin</b>                    |          |      |      |        | 81               |                  |               |                      |                  |     |      | 77               | 73               | 95%              |
| — Samples and groups                        | [µg/L]   |      |      |        |                  |                  |               |                      |                  |     |      |                  |                  |                  |
| <b>Sample A</b>                             |          | 89,2 | 5,8  | 6,5    | 81               |                  |               |                      |                  |     |      | 77               | 74               | 96%              |
| (60) Roche                                  |          | 90,1 | 4,6  | 5,1    | 72               | 0                | CVPG          | 90,1                 | 1,3              | 13% | 78,3 | 102              | 72               |                  |
| (164) DiaSorin                              |          | 52,4 | 0,37 | 0,71   | 5                | 0                | CVPG          | 52,4                 | 1,0              | 13% | 45,5 | 59,3             | 5                |                  |
| Other                                       |          |      |      |        | 4                | 0                |               |                      |                  |     |      |                  | 0                |                  |
|   |          |      |      |        |                  |                  |               | 1x 24, 3x 29         |                  |     |      |                  |                  |                  |
| <b>Sample B</b>                             |          | 18,7 | 1,0  | 5,4    | 81               |                  |               |                      |                  |     |      | 77               | 74               | 96%              |
| (60) Roche                                  |          | 18,9 | 0,73 | 3,9    | 72               | 0                | CVPG          | 18,9                 | 0,21             | 13% | 16,4 | 21,4             | 72               |                  |
| (164) DiaSorin                              |          | 12,4 | 0,22 | 1,8    | 5                | 0                | CVPG          | 12,4                 | 0,63             | 13% | 10,7 | 14,1             | 5                |                  |
| Other                                       |          |      |      |        | 4                | 0                |               |                      |                  |     |      |                  | 0                |                  |
|   |          |      |      |        |                  |                  |               | 1x 24, 3x 29         |                  |     |      |                  |                  |                  |
| <b>(435) 25-hydroxyvitamin D</b>            |          |      |      |        | 155              |                  |               |                      |                  |     |      | 149              | 142              | 95%              |
| — Samples and groups                        | [nmol/L] |      |      |        |                  |                  |               |                      |                  |     |      |                  |                  |                  |
| <b>Sample A</b>                             |          | 143  | 33   | 23     | 155              |                  |               |                      |                  |     |      | 149              | 142              | 95%              |
| (1) Abbott                                  |          | 123  | 8,3  | 6,8    | 40               | 0                | CVPG          | 123                  | 3,2              | 33% | 82,4 | 164              | 40               |                  |
| (12) Beckman Coulter                        |          | 253  | 42   | 17     | 15               | 0                | CVPG          | 253                  | 26               | 33% | 169  | 337              | 15               |                  |
| (60) Roche                                  |          | 92,3 | 11   | 12     | 10               | 0                | CVPG          | 92,3                 | 8,9              | 33% | 61,8 | 123              | 10               |                  |
| (162) Siemens (Atellica)                    |          | 131  | 13   | 9,7    | 13               | 0                | CVPG          | 131                  | 8,6              | 33% | 87,7 | 175              | 13               |                  |
| (164) DiaSorin                              |          | 135  | 9,8  | 7,3    | 13               | 0                | CVPG          | 135                  | 6,7              | 33% | 90,4 | 180              | 13               |                  |

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| Test   | [unit]   |      |     |        |                  | Comparability    |      |                 |                  |     |      |      | N <sub>eva</sub>    | N <sub>suc</sub> | S <sub>rel</sub> |
|--|----------|------|-----|--------|------------------|------------------|------|-----------------|------------------|-----|------|------|---------------------|------------------|------------------|
|  |          | RoM  | SD  | CV [%] | N <sub>tot</sub> | N <sub>out</sub> | AV   | U <sub>AV</sub> | D <sub>max</sub> | LL  | UL   |      |                     |                  |                  |
| <b>(435) 25-hydroxyvitamin D</b>             | [nmol/L] |      |     |        | 155              |                  |      |                 |                  |     |      |      | 149                 | 142              | 95%              |
| Samples and groups                           |          |      |     |        |                  |                  |      |                 |                  |     |      |      |                     |                  |                  |
| <b>Sample A</b>                              |          | 143  | 33  | 23     | 155              |                  |      |                 |                  |     |      |      | 149                 | 142              | 95%              |
| (179) Siemens                                |          | 126  | 12  | 9,5    | 10               | 0                | CVPG | 126             | 9,2              | 33% | 84,4 | 168  | 10                  |                  |                  |
| (256) Roche (2)                              |          | 166  | 16  | 9,5    | 48               | 0                | CVPG | 166             | 5,6              | 33% | 111  | 221  | 48                  |                  |                  |
| Other  |          |      |     |        | 6                | 0                |      |                 |                  |     |      |      | 0                   |                  |                  |
| 1x 15, 1x 25, 1x 149, 1x 183, 1x 998, 1x 999 |          |      |     |        |                  |                  |      |                 |                  |     |      |      |                     |                  |                  |
| <b>Sample B</b>                              |          | 78,4 | 23  | 29     | 155              |                  |      |                 |                  |     |      |      | 149                 | 143              | 96%              |
| (1) Abbott                                   |          | 60,2 | 3,9 | 6,5    | 40               | 0                | CVPG | 60,2            | 1,5              | 33% | 40,3 | 80,1 | 40                  |                  |                  |
| (12) Beckman Coulter                         |          | 170  | 24  | 14     | 15               | 0                | CVPG | 170             | 15               | 33% | 113  | 227  | 15                  |                  |                  |
| (60) Roche                                   |          | 46,8 | 7,4 | 16     | 10               | 0                | CVPG | 46,8            | 5,8              | 33% | 31,3 | 62,3 | 10                  |                  |                  |
| (162) Siemens (Atellica)                     |          | 68,4 | 6,1 | 8,9    | 13               | 0                | CVPG | 68,4            | 4,1              | 33% | 45,8 | 91   | 13                  |                  |                  |
| (164) DiaSorin                               |          | 77,0 | 4,6 | 6,0    | 13               | 0                | CVPG | 77              | 3,1              | 33% | 51,5 | 103  | 13                  |                  |                  |
| (179) Siemens                                |          | 71,0 | 8,7 | 12     | 10               | 0                | CVPG | 71              | 6,7              | 33% | 47,5 | 94,5 | 10                  |                  |                  |
| (256) Roche (2)                              |          | 93,3 | 8,9 | 9,6    | 48               | 0                | CVPG | 93,3            | 3,2              | 33% | 62,5 | 125  | 48                  |                  |                  |
| Other  |          |      |     |        | 6                | 0                |      |                 |                  |     |      |      | 0                   |                  |                  |
| 1x 15, 1x 25, 1x 149, 1x 183, 1x 998, 1x 999 |          |      |     |        |                  |                  |      |                 |                  |     |      |      |                     |                  |                  |
| st_kn_p                                      |          |      |     |        |                  |                  |      |                 |                  |     |      |      |                     |                  |                  |
| End of report                                |          |      |     |        |                  |                  |      |                 |                  |     |      |      | Printed: 09.11.2021 |                  |                  |