| Tumor entity                  | 53BP1-yield, foci per cell | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | ≥8 |
|------------------------------|----------------------------|---|---|---|---|---|---|---|---|----|
|                              |                            |   |   |   |   |   |   |   |   |    |
| **Head & neck cancer**       |                            |   |   |   |   |   |   |   |   |    |
| no. of cells                 |                            |   |   |   |   |   |   |   |   |    |
| **Observed distribution**    |                            |   |   |   |   |   |   |   |   |    |
| Mean ± SD                    |                            | 39 | 60 | 61 | 91 | 55 | 52 | 26 | 21 | 27 |
| Patient 1 in-vivo            |                            | 38 | 55 | 65 | 99 | 49 | 45 | 21 | 14 | 26 |
|                              |                            | 31 | 59 | 61 | 97 | 55 | 50 | 27 | 20 | 24 |
|                              |                            | 42 | 60 | 59 | 107 | 59 | 49 | 32 | 12 | 19 |
| Patient 2 in-vivo            |                            | 44 | 67 | 67 | 90 | 57 | 53 | 25 | 24 | 29 |
|                              |                            | 48 | 59 | 69 | 99 | 66 | 59 | 22 | 20 | 35 |
|                              |                            | 39 | 63 | 60 | 87 | 61 | 63 | 30 | 17 | 38 |
| Patient 3 in-vivo            |                            | 33 | 51 | 51 | 103 | 55 | 60 | 35 | 22 | 24 |
|                              |                            | 35 | 60 | 68 | 96 | 67 | 52 | 30 | 25 | 18 |
|                              |                            | 41 | 68 | 70 | 84 | 62 | 56 | 28 | 18 | 30 |
| Patient 4 in-vivo            |                            | 44 | 52 | 52 | 81 | 43 | 49 | 17 | 26 | 24 |
|                              |                            | 41 | 63 | 54 | 79 | 48 | 47 | 16 | 29 | 31 |
|                              |                            | 36 | 61 | 60 | 75 | 42 | 42 | 24 | 27 | 28 |
| **Poisson distribution**     |                            |   |   |   |   |   |   |   |   |    |
| Mean ± SD                    |                            | 14 | 48 | 82 | 94 | 80 | 56 | 32 | 16 | 4  |
| Donor 1 ex-vivo              |                            | 21 | 56 | 56 | 99 | 75 | 59 | 28 | 10 | 4  |
|                              |                            | 14 | 50 | 50 | 92 | 71 | 61 | 33 | 13 | 3  |
|                              |                            | 16 | 51 | 51 | 98 | 78 | 53 | 30 | 14 | 5  |
| Donor 2 ex-vivo              |                            | 9  | 43 | 43 | 86 | 85 | 56 | 35 | 20 | 4  |
|                              |                            | 11 | 38 | 38 | 89 | 90 | 55 | 36 | 21 | 2  |
|                              |                            | 15 | 46 | 46 | 92 | 83 | 51 | 39 | 17 | 3  |
| Donor 3 ex-vivo              |                            | 10 | 42 | 42 | 94 | 77 | 58 | 32 | 11 | 5  |
|                              |                            | 12 | 49 | 49 | 90 | 80 | 57 | 29 | 15 | 5  |
|                              |                            | 8  | 50 | 50 | 91 | 72 | 59 | 34 | 18 | 2  |
| Donor 4 ex-vivo              |                            | 18 | 49 | 49 | 105 | 84 | 52 | 28 | 16 | 5  |
|                              |                            | 22 | 46 | 46 | 93 | 81 | 55 | 26 | 22 | 2  |
|                              |                            | 15 | 52 | 52 | 98 | 82 | 53 | 29 | 19 | 3  |
| **Rectal cancer**            |                            |   |   |   |   |   |   |   |   |    |
| no. of cells                 |                            |   |   |   |   |   |   |   |   |    |
| **Observed distribution**    |                            |   |   |   |   |   |   |   |   |    |
| Mean ± SD                    |                            | 50 | 66 | 103 | 100 | 81 | 47 | 32 | 17 | 21 |
| Patient 1 in-vivo            |                            | 47 | 60 | 114 | 89 | 77 | 53 | 35 | 19 | 13 |
|                              |                            | 49 | 65 | 113 | 99 | 75 | 50 | 36 | 15 | 19 |
|                              |                            | 51 | 67 | 109 | 93 | 84 | 47 | 30 | 14 | 25 |
| Patient 2 in-vivo            |                            | 53 | 70 | 105 | 103 | 80 | 41 | 32 | 23 | 17 |
|                              |                            | 58 | 69 | 97 | 100 | 82 | 49 | 25 | 20 | 27 |
|                              |                            | 55 | 62 | 101 | 99 | 88 | 50 | 26 | 19 | 20 |
| Patient 3 in-vivo            |                            | 50 | 58 | 102 | 110 | 75 | 45 | 29 | 11 | 21 |
|                              |                            | 49 | 61 | 96 | 105 | 71 | 44 | 31 | 13 | 24 |
|                              |                            | 53 | 65 | 99 | 100 | 79 | 40 | 26 | 16 | 17 |
| Patient 4 in-vivo            |                            | 50 | 60 | 100 | 98 | 80 | 49 | 34 | 17 | 15 |
|                              |                            | 51 | 67 | 104 | 101 | 86 | 50 | 32 | 21 | 20 |
|                              |                            | 51 | 68 | 94 | 95 | 89 | 47 | 36 | 22 | 19 |
| Patient 5 | 47 | 70 | 102 | 104 | 90 | 41 | 37 | 15 | 24 |
|----------|----|----|-----|-----|----|----|----|----|----|
| *in-vivo* | 42 | 74 | 110 | 111 | 81 | 42 | 40 | 16 | 22 |
|          | 50 | 69 | 105 | 99  | 79 | 49 | 37 | 19 | 26 |

**Poisson distribution**

| Mean ± SD | 22 ± 0.82 | 68 ± 1.19 | 108 ± 1.35 | 114 ± 1.21 | 92 ± 0.89 | 58 ± 0.81 | 32 ± 0.69 | 14 ± 0.86 | 8 ± 0.51 |
|-----------|-----------|-----------|-------------|------------|-----------|-----------|-----------|-----------|---------|
| Donor 1   | 19        | 77        | 111         | 115        | 90        | 60        | 32        | 15        | 9       |
| *ex-vivo*  | 20        | 72        | 112         | 118        | 94        | 55        | 29        | 10        | 8       |
|           | 25        | 70        | 107         | 114        | 92        | 57        | 30        | 9         | 5       |
| Donor 2   | 23        | 68        | 113         | 110        | 89        | 58        | 27        | 16        | 8       |
| *ex-vivo*  | 19        | 62        | 100         | 116        | 92        | 62        | 33        | 19        | 7       |
|           | 15        | 61        | 109         | 117        | 95        | 61        | 35        | 14        | 5       |
| Donor 3   | 22        | 69        | 108         | 119        | 93        | 60        | 29        | 21        | 8       |
| *ex-vivo*  | 24        | 73        | 99          | 107        | 97        | 55        | 33        | 18        | 4       |
|           | 20        | 74        | 114         | 108        | 90        | 54        | 30        | 16        | 10      |
| Donor 4   | 17        | 66        | 101         | 107        | 91        | 60        | 34        | 15        | 11      |
| *ex-vivo*  | 25        | 63        | 110         | 110        | 99        | 62        | 36        | 16        | 8       |
|           | 26        | 62        | 103         | 113        | 98        | 64        | 30        | 12        | 9       |
| Donor 5   | 25        | 69        | 112         | 119        | 87        | 58        | 28        | 12        | 7       |
| *ex-vivo*  | 20        | 66        | 115         | 120        | 89        | 53        | 35        | 10        | 6       |
|           | 23        | 67        | 102         | 121        | 90        | 57        | 31        | 13        | 10      |