Supplemental Data:

Table S1

Detailed results of dynamic contrast-enhanced MR imaging of the breast, DWI, 3D 1H-MRSI and 18FDG PET the assigned final MRI BI-RADS® classification for benign and malignant lesions

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ID** | **Type of EH** | **Mass margins** | **Mass shape** | **Mass EH pattern** | **Quantitive curve type analysis**  | **NMLE distribution** | **NMLE pattern** | **NMLE symmetry** | **MRI BI-RADS** | **ADC mm2/sec** | **SNR** | **SUVmax** | **Histopathology** | **Size** |
| **Benign Lesions** |
| 4 | Mass | Smooth | Oval | Heterogeneous | III |   |   |   | 4 | 2072 | 1.91 | 2.83 | FA | 28 |
| 6 | Mass | Smooth | Oval | rim enhancement | III |   |   |   | 5 | 1471 | 0 | 2.1 | High risk | 10 |
| 7 | Mass | Smooth | Round | Homogeneous | I |   |   |   | 2 | 1616 | 0 | 2.4 | Gynaecomastia | 15 |
| 8 | Mass | Smooth | Oval | Non-Enhancing Septa | ! |   |   |   | 2 | 1448 | 0 | 1.4 | FA | 38 |
| 13 | Mass | Smooth | Oval | Homogeneous | II |   |   |   | 2 | 1557 | 0 | 1.41 | FAH | 12 |
| 14 | Mass | Smooth | Oval | Homogeneous | II |   |   |   | 2 | 1325 | 0 | 1.57 | Papilloma | 7 |
| 16 | Mass | Spiculated | Irregular | rim enhancement | III |   |   |   | 5 | 1152 | 0 | 6.52 | Abcsess | 75 |
| 22 | Mass | Smooth | Oval | Homogeneous | ! |   |   |   | 2 | 1872 | 0 | 1.6 | FA | 7 |
| 31 | Mass | Smooth | Oval | Non-Enhancing Septa | I |   |   |   | 2 | 1645 | 2.41 | 3.59 | FA | 19 |
| 32 | Mass | Smooth | Oval | Non-Enhancing Septa | II |   |   |   | 2 | 1418 | 0 | 1.72 | FA | 20 |
| 33 | Mass | Smooth | Lobulated | Non-Enhancing Septa | III |   |   |   | 2 | 1653 | 5.6 | 3.31 | FA | 36 |
| 35 | Mass | Smooth | Lobulated | Non-Enhancing Septa | I |   |   |   | 2 | 1551 | 2.38 | 2.73 | FA | 39 |
| 36 | Mass | Smooth | Oval | Homogeneous | I |   |   |   | 2 | 1554 | 0 | 1.93 | FCC and CCC | 8 |
| 37 | Mass | Smooth | Round | Homogeneous | I |   |   |   | 2 | 1578 | 0 | 1.69 | FA | 5 |
| 44 | Mass | Smooth | Round | Homogeneous | II |   |   |   | 2 | 2520 | 0 | 2.6 | Fat Necrosis | 9 |
| 49 | Mass | Smooth | Lobulated | Non-Enhancing Septa | III |   |   |   | 2 | 1509 | 0 | 2.37 | FAH | 13 |
| 52 | Mass | Irregular  | Oval | Homogeneous | III |   |   |   | 5 | 1607 | 0 | 1.32 | DH without Atypia | 6 |
| 55 | Mass | Smooth | Oval | Homogeneous | I |   |   |   | 2 | 1366 | 0 | 5 | Fat Necrosis | 16 |
| 60 | Mass | Smooth | Round | Homogeneous | II |   |   |   | 3 | 2403 | 0 | 1.65 | DH without Atypia | 6 |
| 34 | NMLE |   |   |   |   | Regional  | Homogeneous | Assymetric | 3 | 1131 | 0 | 2.78 | Pseudoangiomatosis | 19 |
| 48 | NMLE |   |   |   |   | Regional  | Clumped | Assymetric | 4 | 993 | 1.99 | 5.09 | High risk | 50 |
| 50 | NMLE |   |   |   |   | Multiple Regions | Homogeneous | Assymetric | 3 | 1475 | 0 | 2.78 | Papilloma | 8 |
| 64 | NMLE |   |   |   |   | Segmental | Heterogeneous | Assymetric | 4 | 1100 | 6.24 | 6.9 | Abcsess | 68 |
| **Malignant Lesions** |
| 1 | Mass | Smooth | Oval | Homogeneous | II |   |   |   | 2 | 646 | 5.97 | 4.87 | Melanoma Metastasis | 18 |
| 2 | Mass | Irregular  | Round | Homogeneous | I |   |   |   | 4 | 1159 | 4.24 | 6.18 | IDC | 29 |
| 3 | Mass | Irregular  | Lobulated | Heterogeneous | I |   |   |   | 4 | 747 | 7.5 | 2.42 | ILC | 27 |
| 5 | Mass | Irregular  | Round | Heterogeneous | III |   |   |   | 5 | 1002 | 21.28 | 31.19 | IDC | 55 |
| 9 | Mass | Spiculated | Round | Heterogeneous | II |   |   |   | 4 | 1616 | 3.17 | 7.1 | Mucinous Carcinoma | 15 |
| 10 | Mass | Spiculated | Irregular | Heterogeneous | I |   |   |   | 4 | 1070 | 3.72 | 4.09 | IDC | 23 |
| 11 | Mass | Irregular  | Irregular | Homogeneous | III |   |   |   | 5 | 1165 | 3.96 | 5.1 | IDC | 32 |
| 15 | Mass | Irregular  | Round | Heterogeneous | III |   |   |   | 5 | 1020 | 1.3 | 1.76 | DCIS | 10 |
| 17 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 749 | 15.41 | 6.26 | IDC | 40 |
| 18 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 799 | 8.65 | 6.18 | IDC | 43 |
| 19 | Mass | Spiculated | Irregular | Heterogeneous | III |   |   |   | 5 | 1006 | 0 | 1.1 | IDC | 12 |
| 20 | Mass | Irregular  | Irregular | Homogeneous | III |   |   |   | 5 | 1456 | 12.86 | 3.22 | Mucinous Carcinoma | 6 |
| 21 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 1068 | 0 | 2.4 | ILC | 20 |
| 23 | Mass | Spiculated | Irregular | Heterogeneous | III |   |   |   | 5 | 743 | 11.41 | 8.24 | IDC | 25 |
| 24 | Mass | Spiculated | Irregular | Heterogeneous | III |   |   |   | 5 | 714 | 8.36 | 8.73 | IDC | 13 |
| 25 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 969 | 3.04 | 7.56 | IDC | 18 |
| 26 | Mass | Irregular  | Irregular | Homogeneous | III |   |   |   | 5 | 749 | 14.33 | 8.67 | IDC | 75 |
| 27 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 746 | 4.33 | 6.65 | IDC | 17 |
| 28 | Mass | Irregular  | Round | Homogeneous | III |   |   |   | 5 | 1191 | 6.53 | 9.04 | IDC | 35 |
| 29 | Mass | Spiculated | Irregular | Heterogeneous | III |   |   |   | 5 | 777 | 51.19 | 10.23 | IDC | 75 |
| 38 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 797 | 3.02 | 4.7 | IDC | 14 |
| 39 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 912 | 14.61 | 13.53 | IDC | 64 |
| 40 | Mass | Spiculated | Irregular | Heterogeneous | III |   |   |   | 5 | 827 | 50.93 | 9.56 | IDC | 38 |
| 41 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 1121 | 6.39 | 2.32 | IDC | 16 |
| 42 | Mass | Irregular  | Irregular | Heterogeneous | II |   |   |   | 4 | 750 | 2.75 | 1.77 | ILC | 12 |
| 45 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 1088 | 4.33 | 9.5 | IDC | 28 |
| 46 | Mass | Spiculated | Round | Heterogeneous | III |   |   |   | 5 | 981 | 15.4 | 4.9 | IDC | 34 |
| 47 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 988 | 7.45 | 7.4 | IDC | 38 |
| 51 | Mass | Irregular  | Round | Heterogeneous | III |   |   |   | 5 | 1011 | 4.44 | 10.43 | IDC | 26 |
| 53 | Mass | Irregular  | Spiculated | Heterogeneous | III |   |   |   | 5 | 678 | 9.27 | 5.3 | IDC | 28 |
| 54 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 538 | 25.34 | 7.54 | IDC | 74 |
| 56 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 821 | 0 | 2.08 | IDC | 17 |
| 57 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 776 | 5.31 | 9.37 | IDC | 37 |
| 58 | Mass | Spiculated | Irregular | Heterogeneous | III |   |   |   | 5 | 932 | 2.79 | 5.58 | ILC | 20 |
| 59 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 856 | 2.67 | 6.25 | IDC | 16 |
| 62 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 750 | 0 | 25 | IDC | 12 |
| 63 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 890 | 25.25 | 8.3 | IDC | 28 |
| 65 | Mass | Irregular  | Spiculated | Heterogeneous | III |   |   |   | 5 | 790 | 19.2 | 18 | IDC | 24 |
| 66 | Mass | Irregular  | Spiculated | Heterogeneous | II |   |   |   | 4 | 570 | 18.7 | 17.7 | IDC | 50 |
| 67 | Mass | Irregular  | Spiculated | Heterogeneous | III |   |   |   | 5 | 900 | 0 | 0.9 | IDC | 15 |
| 68 | Mass | Irregular  | Irregular | Heterogeneous | III |   |   |   | 5 | 976 | 2.15 | 2.5 | ILC | 48 |
| 69 | Mass | Irregular  | Spiculated | Heterogeneous | III |   |   |   | 5 | 900 | 7.5 | 5 | IDC | 60 |
| 70 | Mass | Irregular  | Spiculated | Heterogeneous | III |   |   |   | 5 | 600 | 5.9 | 6.2 | IDC | 16 |
| 71 | Mass | Irregular  | Spiculated | Heterogeneous | III |   |   |   | 5 | 659 | 1.6 | 2.6 | ILC | 57 |
| 72 | Mass | Irregular  | Spiculated | Heterogeneous | III |   |   |   | 5 | 521 | 2.2 | 3.25 | IDC | 10 |
| 73 | Mass | Irregular  | Spiculated | Heterogeneous | III |   |   |   | 5 | 710 | 11.5 | 5.4 | IDC | 14 |
| 74 | Mass | Irregular  | Spiculated | Heterogeneous | III |   |   |   | 5 | 1068 | 4.8 | 4.1 | DCIS | 25 |
| 76 | Mass | Irregular  | Spiculated | Heterogeneous | II |   |   |   | 4 | 821 | 8.3 | 12.5 | IDC | 34 |
| 12 | NMLE |   |   |   |   | Segmental | Heterogeneous | Assymetric | 5 | 1265 | 26.88 | 2.6 | DCIS | 28 |
| 30 | NMLE |   |   |   |   | Segmental | Heterogeneous | Assymetric | 5 | 1119 | 4.99 | 3.5 | DCIS | 77 |
| 43 | NMLE |   |   |   |   | Regional  | Heterogeneous | Assymetric | 4 | 1205 | 3.62 | 2.7 | IDC | 57 |
| 61 | NMLE |   |   |   |   | Linear | Heterogeneous | Assymetric | 4 | 1302 | 0 | 1.6 | IDC | 20 |
| 75 | NMLE |   |   |   |   | Segmental | Heterogeneous | Assymetric | 5 | 1170 | 6.2 | 8.2 | IDC | 77 |