sTable 1 Comparison between training set and test set groups

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CharacteristicsAnd US features | Total(n=396) | Test set(n=116) | Training set(n=280) | P value |
| **Age** | 41.84±10.87 | 40.70±10.58 | 42.31±10.97 | 0.213 |
| **Size(mm)** | 11.65±7.04 | 11.43±7.02 | 11.74±7.06 | 0.625 |
| **Gender** |  |  |  | 0.558 |
| Male | 103(26.01) | 33(28.45) | 70(25.00) |  |
| Female | 293(73.99) | 83(71.55) | 210(75.00) |  |
| **location** |  |  |  | 0.918 |
| Upper | 94(23.74) | 30(25.86) | 64(22.86) |  |
| Mid | 189(47.73) | 55(47.41) | 134(47.86) |  |
| Lower | 95(23.99) | 26(22.41) | 69(24.64) |  |
| Sthmus | 18(4.55) | 5(4.31) | 13(4.64) |  |
| **Composition** |  |  |  | 0.917 |
| Solid | 380(95.96) | 112(96.55) | 268(95.71) |  |
| Predominately solid | 16(4.04) | 4(3.45) | 12(4.29) |  |
| **Echogenicity** |  |  |  | 0.359 |
| Hypoechoic | 386(97.47) | 115(99.14) | 271(96.79) |  |
| Isoechoic | 7(1.77) | 1(0.86) | 6(2.14) |  |
| Hyperechoic | 3(0.76) | 0 | 3(1.07) |  |
| **Echotexture** |  |  |  | 1.000 |
| Heterogeneous | 396(100.00) | 116(100.00) | 280(100.00) |  |
| **Orientation** |  |  |  | 0.873 |
| Horizontal | 209(52.78) | 60(51.72) | 149(53.21) |  |
| Vertical | 187(47.22) | 56(48.28) | 131(46.79) |  |
| **Echogenic\_foc** |  |  |  | 0.108 |
| No | 123(31.06) | 39(33.62) | 84(30.00) |  |
| Microcalcifications | 257(64.90) | 76(65.52) | 181(64.64) |  |
| Macrocalcifications | 16(4.04) | 1(0.86) | 15(5.36) |  |
| **Margin** |  |  |  | 0.806 |
| Ill-defined | 183(46.21) | 52(44.83) | 131(46.79) |  |
| Irregular margin | 213(53.79) | 64(55.17) | 149(53.21) |  |
| **ETE** |  |  |  | 0.701 |
| No | 347(87.63) | 100(86.21) | 247(88.21) |  |
| Yes | 49(12.37) | 16(13.79) | 33(11.79) |  |
| **Halo** |  |  |  | 1.000 |
| Present halo | 10(2.53) | 3(2.59) | 7(2.50) |  |
| Absent halo | 386(97.47) | 113(97.41) | 273(97.50) |  |
| **CDFI** |  |  |  | 0.244 |
| Avascularity | 20(5.05) | 8(6.90) | 12(4.29) |  |
| Mainly peripheral vascularity | 331(83.59) | 100(86.21) | 231(82.50) |  |
| Mainly central vascularity | 7(1.77) | 1(0.86) | 6(2.14) |  |
| Mixed vascularity | 38(9.60) | 7(6.03) | 31(11.07) |  |
| **Enhancement\_pattern** |  |  |  | 1.000 |
| Homogeneous | 5(1.26) | 1(0.86) | 4(1.43) |  |
| Heterogeneous | 391(98.74) | 115(99.14) | 276(98.57) |  |
| **Peak\_intensity** |  |  |  | 0.468 |
| Hypoenhancement | 294(74.24) | 89(76.72) | 205(73.21) |  |
| Isoenhancement | 79(19.95) | 19(16.38) | 60(21.43) |  |
| Hyperenhancement | 23(5.81) | 8(6.90) | 15(5.36) |  |
| **Ring\_enhancement** |  |  |  | 0.645 |
| Absent | 389(98.23) | 115(99.14) | 274(97.86) |  |
| Present | 7(1.77) | 1(0.86) | 6(2.14) |  |
| **Nodule\_composition\_at\_CEUS** |  |  |  | 0.300 |
| Cystic | 1(0.25) | 1(0.86) | 0 |  |
| Solid | 369(93.18) | 109(93.97) | 260(92.86) |  |
| Predominately solid | 24(6.06) | 5(4.31) | 19(6.79) |  |
| Predominately cystic | 2(0.51) | 1(0.86) | 1(0.36) |  |

ETE: Extrathyroidal extension; CDFI: Color Doppler flow imaging; CEUS: Contrast-enhanced ultrasound US: Ultrasound