Train cohort : RF model

> summary(DCA.RF\_train)

Standardized Net Benefit (95% Confidence Intervals):

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risk cost:benefit percent All Label ~ RFmodel None

threshold ratio high risk

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0 0:1 100 1 1 0

(100, 100) (1, 1) (1, 1)

0.01 1:99 100 0.958 0.958 0

(40.278, 100) (0.937, 0.97) (0.937, 0.987)

0.02 1:49 100 0.915 0.915 0

(31.019, 100) (0.873, 0.939) (0.892, 0.983)

0.03 3:97 41.204 0.872 0.941 0

(27.778, 100) (0.808, 0.907) (0.855, 0.978)

0.04 1:24 36.574 0.827 0.914 0

(26.852, 100) (0.742, 0.875) (0.85, 0.974)

0.05 1:19 33.796 0.782 0.911 0

(25, 52.778) (0.674, 0.842) (0.83, 0.967)

0.06 3:47 33.333 0.736 0.878 0

(23.148, 44.444) (0.604, 0.809) (0.817, 0.962)

0.07 7:93 33.333 0.688 0.869 0

(22.222, 40.741) (0.533, 0.774) (0.799, 0.96)

0.08 2:23 29.167 0.64 0.879 0

(20.37, 39.352) (0.461, 0.739) (0.782, 0.954)

0.09 9:91 29.167 0.59 0.872 0

(19.907, 38.426) (0.387, 0.703) (0.758, 0.951)

0.1 1:9 28.704 0.54 0.841 0

(18.981, 36.111) (0.311, 0.667) (0.754, 0.947)

0.11 11:89 27.315 0.488 0.843 0

(18.981, 35.648) (0.234, 0.629) (0.741, 0.946)

0.12 3:22 25 0.435 0.853 0

(18.519, 34.722) (0.155, 0.591) (0.731, 0.942)

0.13 13:87 25 0.381 0.848 0

(18.519, 33.333) (0.074, 0.552) (0.729, 0.938)

0.14 7:43 25 0.326 0.843 0

(18.056, 32.87) (-0.009, 0.512) (0.73, 0.934)

0.15 3:17 23.611 0.269 0.85 0

(17.593, 32.407) (-0.094, 0.471) (0.716, 0.932)

0.16 4:21 23.611 0.211 0.846 0

(17.593, 31.481) (-0.181, 0.429) (0.708, 0.93)

0.17 17:83 23.611 0.151 0.841 0

(17.13, 30.556) (-0.27, 0.386) (0.705, 0.927)

0.18 9:41 23.611 0.091 0.837 0

(16.667, 30.556) (-0.361, 0.341) (0.71, 0.923)

0.19 19:81 23.611 0.028 0.832 0

(16.667, 29.63) (-0.454, 0.296) (0.699, 0.917)

0.2 1:4 23.611 -0.036 0.827 0

(16.667, 29.63) (-0.55, 0.25) (0.69, 0.912)

0.21 21:79 23.611 -0.101 0.822 0

(16.204, 29.167) (-0.648, 0.203) (0.681, 0.912)

0.22 11:39 23.611 -0.168 0.817 0

(16.204, 29.167) (-0.749, 0.154) (0.669, 0.91)

0.23 23:77 21.296 -0.237 0.786 0

(16.204, 29.167) (-0.852, 0.104) (0.658, 0.902)

0.24 6:19 21.296 -0.308 0.782 0

(16.204, 29.167) (-0.958, 0.053) (0.65, 0.898)

0.25 1:3 21.296 -0.381 0.778 0

(16.204, 29.167) (-1.067, 0) (0.644, 0.889)

0.26 13:37 21.296 -0.456 0.773 0

(16.204, 28.704) (-1.178, -0.054) (0.635, 0.886)

0.27 27:73 21.296 -0.532 0.769 0

(15.741, 28.241) (-1.293, -0.11) (0.63, 0.883)

0.28 7:18 21.296 -0.611 0.765 0

(15.741, 27.778) (-1.411, -0.167) (0.619, 0.879)

0.29 29:71 21.296 -0.692 0.76 0

(15.278, 27.778) (-1.532, -0.225) (0.607, 0.877)

0.3 3:7 21.296 -0.776 0.755 0

(15.278, 27.778) (-1.657, -0.286) (0.597, 0.875)

0.31 31:69 21.296 -0.861 0.75 0

(15.278, 27.778) (-1.786, -0.348) (0.586, 0.873)

0.32 8:17 21.296 -0.95 0.745 0

(15.278, 27.778) (-1.918, -0.412) (0.57, 0.87)

0.33 33:67 21.296 -1.041 0.74 0

(15.278, 27.778) (-2.054, -0.478) (0.563, 0.865)

0.34 17:33 21.296 -1.134 0.734 0

(15.278, 27.315) (-2.194, -0.545) (0.549, 0.855)

0.35 7:13 21.296 -1.231 0.729 0

(14.352, 26.852) (-2.338, -0.615) (0.541, 0.852)

0.36 9:16 21.296 -1.33 0.723 0

(14.352, 26.852) (-2.487, -0.688) (0.53, 0.848)

0.37 37:63 21.296 -1.433 0.717 0

(13.889, 26.852) (-2.641, -0.762) (0.517, 0.844)

0.38 19:31 21.296 -1.539 0.711 0

(13.426, 26.852) (-2.8, -0.839) (0.499, 0.838)

0.39 39:61 21.296 -1.649 0.705 0

(13.426, 26.389) (-2.964, -0.918) (0.486, 0.831)

0.4 2:3 21.296 -1.762 0.698 0

(12.963, 26.389) (-3.133, -1) (0.472, 0.828)

0.41 41:59 21.296 -1.879 0.692 0

(12.963, 26.389) (-3.308, -1.085) (0.45, 0.822)

0.42 21:29 21.296 -2 0.685 0

(12.5, 26.389) (-3.49, -1.172) (0.434, 0.819)

0.43 43:57 19.907 -2.125 0.648 0

(12.5, 26.389) (-3.677, -1.263) (0.425, 0.81)

0.44 11:14 19.907 -2.255 0.641 0

(12.5, 26.389) (-3.871, -1.357) (0.409, 0.807)

0.45 9:11 19.907 -2.39 0.634 0

(11.574, 26.389) (-4.073, -1.455) (0.396, 0.803)

0.46 23:27 19.907 -2.529 0.627 0

(11.574, 26.389) (-4.281, -1.556) (0.38, 0.801)

0.47 47:53 19.907 -2.674 0.619 0

(11.574, 25.926) (-4.498, -1.66) (0.366, 0.796)

0.48 12:13 19.907 -2.824 0.612 0

(11.574, 25.926) (-4.723, -1.769) (0.358, 0.791)

0.49 49:51 19.907 -2.98 0.604 0

(11.111, 25.926) (-4.957, -1.882) (0.35, 0.785)

0.5 1:1 15.741 -3.143 0.571 0

(11.111, 25.926) (-5.2, -2) (0.333, 0.773)

0.51 51:49 15.741 -3.312 0.567 0

(10.648, 25.463) (-5.453, -2.122) (0.317, 0.767)

0.52 13:12 15.741 -3.488 0.562 0

(10.648, 25.463) (-5.717, -2.25) (0.306, 0.761)

0.53 53:47 15.741 -3.672 0.556 0

(10.648, 25.463) (-5.991, -2.383) (0.294, 0.755)

0.54 27:23 15.741 -3.863 0.551 0

(10.648, 25) (-6.278, -2.522) (0.257, 0.749)

0.55 11:9 15.741 -4.063 0.545 0

(10.185, 25) (-6.578, -2.667) (0.238, 0.742)

0.56 14:11 15.741 -4.273 0.539 0

(10.185, 25) (-6.891, -2.818) (0.225, 0.739)

0.57 57:43 14.815 -4.492 0.485 0

(9.722, 25) (-7.219, -2.977) (0.217, 0.734)

0.58 29:21 14.815 -4.721 0.478 0

(9.722, 24.074) (-7.562, -3.143) (0.204, 0.728)

0.59 59:41 14.815 -4.962 0.472 0

(9.722, 23.611) (-7.922, -3.317) (0.189, 0.72)

0.6 3:2 14.815 -5.214 0.464 0

(9.722, 23.148) (-8.3, -3.5) (0.167, 0.714)

0.61 61:39 14.815 -5.48 0.457 0

(9.722, 22.685) (-8.697, -3.692) (0.155, 0.708)

0.62 31:19 14.352 -5.759 0.425 0

(9.722, 21.759) (-9.116, -3.895) (0.139, 0.701)

0.63 63:37 13.889 -6.054 0.393 0

(9.259, 20.833) (-9.557, -4.108) (0.125, 0.693)

0.64 16:9 13.889 -6.365 0.384 0

(9.259, 20.37) (-10.022, -4.333) (0.108, 0.684)

0.65 13:7 13.889 -6.694 0.374 0

(9.259, 20.37) (-10.514, -4.571) (0.091, 0.68)

0.66 33:17 13.889 -7.042 0.364 0

(9.259, 19.444) (-11.035, -4.824) (0.073, 0.664)

0.67 67:33 12.5 -7.411 0.354 0

(8.796, 19.444) (-11.588, -5.091) (0.054, 0.658)

0.68 17:8 12.5 -7.804 0.345 0

(8.796, 19.444) (-12.175, -5.375) (0.033, 0.65)

0.69 69:31 12.5 -8.221 0.336 0

(8.796, 18.981) (-12.8, -5.677) (0.01, 0.637)

0.7 7:3 12.5 -8.667 0.325 0

(8.333, 18.519) (-13.467, -6) (-0.034, 0.629)

0.71 71:29 12.5 -9.143 0.314 0

(8.333, 18.519) (-14.179, -6.345) (-0.048, 0.627)

0.72 18:7 12.5 -9.653 0.303 0

(7.87, 18.056) (-14.943, -6.714) (-0.071, 0.615)

0.73 73:27 12.5 -10.201 0.29 0

(7.87, 18.056) (-15.763, -7.111) (-0.097, 0.604)

0.74 37:13 12.5 -10.791 0.277 0

(7.87, 17.593) (-16.646, -7.538) (-0.124, 0.585)

0.75 3:1 12.5 -11.429 0.262 0

(7.407, 17.593) (-17.6, -8) (-0.154, 0.568)

0.76 19:6 12.5 -12.119 0.246 0

(7.407, 17.13) (-18.633, -8.5) (-0.184, 0.546)

0.77 77:23 12.5 -12.87 0.229 0

(7.407, 17.13) (-19.757, -9.043) (-0.203, 0.548)

0.78 39:11 11.574 -13.688 0.162 0

(6.944, 17.13) (-20.982, -9.636) (-0.23, 0.54)

0.79 79:21 11.574 -14.585 0.142 0

(6.944, 16.667) (-22.324, -10.286) (-0.252, 0.531)

0.8 4:1 11.574 -15.571 0.119 0

(6.481, 16.667) (-23.8, -11) (-0.25, 0.522)

0.81 81:19 11.574 -16.662 0.094 0

(6.481, 16.667) (-25.432, -11.789) (-0.276, 0.512)

0.82 41:9 11.574 -17.873 0.066 0

(6.019, 16.667) (-27.244, -12.667) (-0.316, 0.51)

0.83 83:17 11.574 -19.227 0.035 0

(5.556, 16.204) (-29.271, -13.647) (-0.355, 0.503)

0.84 21:4 11.574 -20.75 0 0

(5.556, 15.741) (-31.55, -14.75) (-0.407, 0.469)

0.85 17:3 9.259 -22.476 0 0

(4.63, 15.741) (-34.133, -16) (-0.419, 0.459)

0.86 43:7 9.259 -24.449 -0.034 0

(4.63, 15.278) (-37.086, -17.429) (-0.44, 0.46)

0.87 87:13 9.259 -26.725 -0.073 0

(4.63, 15.278) (-40.492, -19.077) (-0.487, 0.458)

0.88 22:3 9.259 -29.381 -0.119 0

(4.63, 15.278) (-44.467, -21) (-0.544, 0.458)

0.89 89:11 9.259 -32.519 -0.173 0

(4.167, 14.815) (-49.164, -23.273) (-0.592, 0.459)

0.9 9:1 9.259 -36.286 -0.238 0

(4.167, 14.352) (-54.8, -26) (-0.682, 0.469)

0.91 91:9 9.259 -40.889 -0.317 0

(3.704, 13.426) (-61.689, -29.333) (-0.77, 0.469)

0.92 23:2 9.259 -46.643 -0.417 0

(0, 13.426) (-70.3, -33.5) (-0.805, 0.459)

0.93 93:7 6.481 -54.041 0.333 0

(0, 13.426) (-81.371, -38.857) (-0.867, 0.467)

0.94 47:3 6.481 -63.905 0.333 0

(0, 12.963) (-96.133, -46) (-0.856, 0.469)

0.95 19:1 6.481 -77.714 0.333 0

(0, 11.574) (-116.8, -56) (-0.953, 0.459)

0.96 24:1 6.481 -98.429 0.333 0

(0, 11.111) (-147.8, -71) (-1.041, 0.458)

0.97 97:3 6.481 -132.952 0.333 0

(0, 10.648) (-199.467, -96) (-1.083, 0.458)

0.98 49:1 0 -202 0 0

(0, 10.185) (-302.8, -146) (-0.786, 0.449)

0.99 99:1 0 -409.143 0 0

(0, 8.796) (-612.8, -296) (0, 0.415)

1 Inf:1 0 NA NA NA

(0, 0) (NA, NA) (NA, NA)

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Train cohort: Myocardial CT attenuation

> summary(DCA.ct\_train)

Standardized Net Benefit (95% Confidence Intervals):

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risk cost:benefit percent All Label ~ CT\_attenuation None

threshold ratio high risk

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0 0:1 100 1 1 0

(100, 100) (1, 1) (1, 1)

0.01 1:99 100 0.958 0.958 0

(100, 100) (0.94, 0.969) (0.94, 0.969)

0.02 1:49 100 0.915 0.915 0

(99.074, 100) (0.878, 0.937) (0.878, 0.937)

0.03 3:97 100 0.872 0.872 0

(98.148, 100) (0.815, 0.905) (0.815, 0.905)

0.04 1:24 100 0.827 0.827 0

(97.222, 100) (0.751, 0.872) (0.751, 0.872)

0.05 1:19 100 0.782 0.782 0

(93.981, 100) (0.686, 0.838) (0.674, 0.838)

0.06 3:47 100 0.736 0.736 0

(91.204, 100) (0.619, 0.804) (0.606, 0.804)

0.07 7:93 100 0.688 0.688 0

(87.037, 100) (0.551, 0.769) (0.533, 0.77)

0.08 2:23 99.537 0.64 0.642 0

(82.407, 100) (0.481, 0.733) (0.461, 0.739)

0.09 9:91 99.537 0.59 0.593 0

(80.556, 100) (0.41, 0.696) (0.387, 0.7)

0.1 1:9 98.611 0.54 0.521 0

(75.463, 100) (0.337, 0.658) (0.308, 0.662)

0.11 11:89 97.685 0.488 0.476 0

(70.37, 100) (0.262, 0.62) (0.245, 0.625)

0.12 3:22 96.759 0.435 0.404 0

(66.204, 100) (0.186, 0.581) (0.161, 0.581)

0.13 13:87 93.056 0.381 0.352 0

(62.5, 100) (0.108, 0.54) (0.111, 0.539)

0.14 7:43 87.963 0.326 0.26 0

(51.389, 100) (0.029, 0.499) (0.029, 0.496)

0.15 3:17 83.796 0.269 0.192 0

(37.037, 100) (-0.053, 0.457) (0.013, 0.443)

0.16 4:21 77.778 0.211 0.117 0

(17.593, 100) (-0.137, 0.414) (-0.011, 0.399)

0.17 17:83 71.759 0.151 0.105 0

(3.241, 100) (-0.222, 0.37) (-0.027, 0.37)

0.18 9:41 65.741 0.091 0.1 0

(0, 100) (-0.31, 0.325) (-0.015, 0.341)

0.19 19:81 57.87 0.028 0.125 0

(0, 100) (-0.4, 0.279) (-0.032, 0.323)

0.2 1:4 45.37 -0.036 0.071 0

(0, 100) (-0.492, 0.231) (-0.033, 0.283)

0.21 21:79 36.111 -0.101 0.139 0

(0, 90.741) (-0.586, 0.182) (-0.017, 0.284)

0.22 11:39 31.019 -0.168 0.1 0

(0, 73.148) (-0.683, 0.133) (-0.036, 0.271)

0.23 23:77 21.296 -0.237 0.137 0

(0, 66.204) (-0.783, 0.081) (-0.008, 0.268)

0.24 6:19 13.426 -0.308 0.189 0

(0, 58.333) (-0.885, 0.029) (0, 0.27)

0.25 1:3 6.944 -0.381 0.167 0

(0, 48.148) (-0.989, -0.025) (0, 0.267)

0.26 13:37 4.63 -0.456 0.077 0

(0, 40.741) (-1.097, -0.081) (0, 0.275)

0.27 27:73 2.315 -0.532 0.119 0

(0, 35.648) (-1.207, -0.138) (0, 0.284)

0.28 7:18 1.852 -0.611 0.095 0

(0, 31.481) (-1.321, -0.196) (0, 0.275)

0.29 29:71 1.389 -0.692 0.071 0

(0, 27.315) (-1.438, -0.256) (0, 0.27)

0.3 3:7 0.926 -0.776 0.048 0

(0, 22.685) (-1.558, -0.318) (0, 0.263)

0.31 31:69 0 -0.861 0 0

(0, 18.056) (-1.681, -0.382) (0, 0.259)

0.32 8:17 0 -0.95 0 0

(0, 16.204) (-1.808, -0.447) (0, 0.252)

0.33 33:67 0 -1.041 0 0

(0, 14.352) (-1.939, -0.515) (0, 0.241)

0.34 17:33 0 -1.134 0 0

(0, 10.185) (-2.074, -0.584) (0, 0.23)

0.35 7:13 0 -1.231 0 0

(0, 7.87) (-2.213, -0.656) (0, 0.222)

0.36 9:16 0 -1.33 0 0

(0, 6.944) (-2.357, -0.73) (0, 0.216)

0.37 37:63 0 -1.433 0 0

(0, 5.556) (-2.505, -0.806) (0, 0.181)

0.38 19:31 0 -1.539 0 0

(0, 4.63) (-2.658, -0.885) (0, 0.174)

0.39 39:61 0 -1.649 0 0

(0, 4.167) (-2.815, -0.966) (0, 0.155)

0.4 2:3 0 -1.762 0 0

(0, 3.704) (-2.978, -1.05) (0, 0.146)

0.41 41:59 0 -1.879 0 0

(0, 3.704) (-3.147, -1.137) (0, 0.149)

0.42 21:29 0 -2 0 0

(0, 3.241) (-3.321, -1.227) (0, 0.136)

0.43 43:57 0 -2.125 0 0

(0, 2.315) (-3.502, -1.32) (0, 0.111)

0.44 11:14 0 -2.255 0 0

(0, 2.315) (-3.689, -1.416) (0, 0.101)

0.45 9:11 0 -2.39 0 0

(0, 2.315) (-3.883, -1.516) (0, 0.1)

0.46 23:27 0 -2.529 0 0

(0, 1.852) (-4.084, -1.62) (0, 0.071)

0.47 47:53 0 -2.674 0 0

(0, 1.389) (-4.292, -1.727) (0, 0.07)

0.48 12:13 0 -2.824 0 0

(0, 0.926) (-4.509, -1.839) (0, 0.039)

0.49 49:51 0 -2.98 0 0

(0, 0.926) (-4.734, -1.955) (0, 0.03)

0.5 1:1 0 -3.143 0 0

(0, 0) (-4.968, -2.075) (0, 0)

0.51 51:49 0 -3.312 0 0

(0, 0) (-5.211, -2.201) (0, 0)

0.52 13:12 0 -3.488 0 0

(0, 0) (-5.465, -2.332) (0, 0)

0.53 53:47 0 -3.672 0 0

(0, 0) (-5.73, -2.468) (0, 0)

0.54 27:23 0 -3.863 0 0

(0, 0) (-6.006, -2.61) (0, 0)

0.55 11:9 0 -4.063 0 0

(0, 0) (-6.294, -2.759) (0, 0)

0.56 14:11 0 -4.273 0 0

(0, 0) (-6.595, -2.914) (0, 0)

0.57 57:43 0 -4.492 0 0

(0, 0) (-6.911, -3.077) (0, 0)

0.58 29:21 0 -4.721 0 0

(0, 0) (-7.241, -3.247) (0, 0)

0.59 59:41 0 -4.962 0 0

(0, 0) (-7.588, -3.426) (0, 0)

0.6 3:2 0 -5.214 0 0

(0, 0) (-7.952, -3.613) (0, 0)

0.61 61:39 0 -5.48 0 0

(0, 0) (-8.334, -3.81) (0, 0)

0.62 31:19 0 -5.759 0 0

(0, 0) (-8.737, -4.018) (0, 0)

0.63 63:37 0 -6.054 0 0

(0, 0) (-9.161, -4.237) (0, 0)

0.64 16:9 0 -6.365 0 0

(0, 0) (-9.609, -4.468) (0, 0)

0.65 13:7 0 -6.694 0 0

(0, 0) (-10.083, -4.712) (0, 0)

0.66 33:17 0 -7.042 0 0

(0, 0) (-10.584, -4.97) (0, 0)

0.67 67:33 0 -7.411 0 0

(0, 0) (-11.116, -5.244) (0, 0)

0.68 17:8 0 -7.804 0 0

(0, 0) (-11.681, -5.535) (0, 0)

0.69 69:31 0 -8.221 0 0

(0, 0) (-12.283, -5.845) (0, 0)

0.7 7:3 0 -8.667 0 0

(0, 0) (-12.925, -6.176) (0, 0)

0.71 71:29 0 -9.143 0 0

(0, 0) (-13.611, -6.53) (0, 0)

0.72 18:7 0 -9.653 0 0

(0, 0) (-14.346, -6.908) (0, 0)

0.73 73:27 0 -10.201 0 0

(0, 0) (-15.135, -7.315) (0, 0)

0.74 37:13 0 -10.791 0 0

(0, 0) (-15.985, -7.753) (0, 0)

0.75 3:1 0 -11.429 0 0

(0, 0) (-16.903, -8.226) (0, 0)

0.76 19:6 0 -12.119 0 0

(0, 0) (-17.898, -8.739) (0, 0)

0.77 77:23 0 -12.87 0 0

(0, 0) (-18.979, -9.296) (0, 0)

0.78 39:11 0 -13.688 0 0

(0, 0) (-20.158, -9.904) (0, 0)

0.79 79:21 0 -14.585 0 0

(0, 0) (-21.45, -10.57) (0, 0)

0.8 4:1 0 -15.571 0 0

(0, 0) (-22.871, -11.302) (0, 0)

0.81 81:19 0 -16.662 0 0

(0, 0) (-24.441, -12.111) (0, 0)

0.82 41:9 0 -17.873 0 0

(0, 0) (-26.186, -13.01) (0, 0)

0.83 83:17 0 -19.227 0 0

(0, 0) (-28.137, -14.016) (0, 0)

0.84 21:4 0 -20.75 0 0

(0, 0) (-30.331, -15.146) (0, 0)

0.85 17:3 0 -22.476 0 0

(0, 0) (-32.817, -16.428) (0, 0)

0.86 43:7 0 -24.449 0 0

(0, 0) (-35.659, -17.892) (0, 0)

0.87 87:13 0 -26.725 0 0

(0, 0) (-38.938, -19.582) (0, 0)

0.88 22:3 0 -29.381 0 0

(0, 0) (-42.763, -21.553) (0, 0)

0.89 89:11 0 -32.519 0 0

(0, 0) (-47.284, -23.883) (0, 0)

0.9 9:1 0 -36.286 0 0

(0, 0) (-52.71, -26.679) (0, 0)

0.91 91:9 0 -40.889 0 0

(0, 0) (-59.341, -30.096) (0, 0)

0.92 23:2 0 -46.643 0 0

(0, 0) (-67.629, -34.368) (0, 0)

0.93 93:7 0 -54.041 0 0

(0, 0) (-78.286, -39.86) (0, 0)

0.94 47:3 0 -63.905 0 0

(0, 0) (-92.495, -47.182) (0, 0)

0.95 19:1 0 -77.714 0 0

(0, 0) (-112.387, -57.434) (0, 0)

0.96 24:1 0 -98.429 0 0

(0, 0) (-142.226, -72.811) (0, 0)

0.97 97:3 0 -132.952 0 0

(0, 0) (-191.957, -98.44) (0, 0)

0.98 49:1 0 -202 0 0

(0, 0) (-291.419, -149.698) (0, 0)

0.99 99:1 0 -409.143 0 0

(0, 0) (-589.806, -303.472) (0, 0)

1 Inf:1 0 NA NA NA

(0, 0) (NA, NA) (NA, NA)

Internal Test cohort : RF model

> summary(DCA.RF\_test)

Standardized Net Benefit (95% Confidence Intervals):

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risk cost:benefit percent All Label ~ RFmodel None

threshold ratio high risk

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0 0:1 100 1 1 0

(100, 100) (1, 1) (1, 1)

0.01 1:99 100 0.961 0.961 0

(29.348, 100) (0.926, 0.976) (0.916, 0.994)

0.02 1:49 56.522 0.922 0.965 0

(27.174, 100) (0.85, 0.951) (0.863, 0.989)

0.03 3:97 47.826 0.881 0.905 0

(23.913, 100) (0.772, 0.926) (0.802, 0.986)

0.04 1:24 40.217 0.84 0.851 0

(22.826, 100) (0.693, 0.9) (0.771, 0.982)

0.05 1:19 39.13 0.798 0.842 0

(21.739, 100) (0.612, 0.873) (0.727, 0.978)

0.06 3:47 39.13 0.755 0.831 0

(20.652, 59.783) (0.53, 0.846) (0.703, 0.976)

0.07 7:93 39.13 0.711 0.819 0

(19.565, 54.348) (0.446, 0.819) (0.685, 0.974)

0.08 2:23 39.13 0.666 0.808 0

(18.478, 52.174) (0.36, 0.791) (0.635, 0.971)

0.09 9:91 39.13 0.62 0.796 0

(17.391, 47.826) (0.272, 0.762) (0.617, 0.966)

0.1 1:9 32.609 0.573 0.819 0

(17.391, 46.739) (0.182, 0.733) (0.607, 0.961)

0.11 11:89 32.609 0.525 0.81 0

(16.304, 46.739) (0.09, 0.702) (0.597, 0.956)

0.12 3:22 32.609 0.476 0.801 0

(16.304, 45.652) (-0.004, 0.672) (0.579, 0.941)

0.13 13:87 30.435 0.426 0.808 0

(15.217, 44.565) (-0.1, 0.64) (0.564, 0.935)

0.14 7:43 30.435 0.375 0.8 0

(15.217, 44.565) (-0.199, 0.608) (0.54, 0.93)

0.15 3:17 26.087 0.322 0.768 0

(15.217, 43.478) (-0.299, 0.575) (0.563, 0.929)

0.16 4:21 23.913 0.268 0.782 0

(15.217, 40.217) (-0.403, 0.541) (0.568, 0.925)

0.17 17:83 23.913 0.213 0.777 0

(14.13, 39.13) (-0.508, 0.507) (0.556, 0.922)

0.18 9:41 23.913 0.157 0.773 0

(14.13, 38.043) (-0.616, 0.472) (0.543, 0.92)

0.19 19:81 23.913 0.099 0.768 0

(14.13, 38.043) (-0.727, 0.435) (0.542, 0.912)

0.2 1:4 23.913 0.039 0.763 0

(14.13, 38.043) (-0.841, 0.398) (0.515, 0.911)

0.21 21:79 23.913 -0.021 0.758 0

(14.13, 36.957) (-0.957, 0.36) (0.506, 0.908)

0.22 11:39 23.913 -0.084 0.753 0

(14.13, 36.957) (-1.077, 0.321) (0.505, 0.903)

0.23 23:77 23.913 -0.148 0.748 0

(14.13, 35.87) (-1.2, 0.281) (0.5, 0.9)

0.24 6:19 23.913 -0.213 0.742 0

(13.043, 34.783) (-1.325, 0.24) (0.515, 0.899)

0.25 1:3 23.913 -0.281 0.737 0

(13.043, 34.783) (-1.455, 0.198) (0.509, 0.905)

0.26 13:37 23.913 -0.35 0.731 0

(13.043, 33.696) (-1.587, 0.154) (0.502, 0.903)

0.27 27:73 23.913 -0.421 0.725 0

(11.957, 32.609) (-1.724, 0.11) (0.495, 0.895)

0.28 7:18 23.913 -0.494 0.719 0

(11.957, 32.609) (-1.864, 0.064) (0.493, 0.893)

0.29 29:71 22.826 -0.569 0.66 0

(11.957, 32.609) (-2.008, 0.017) (0.489, 0.892)

0.3 3:7 22.826 -0.647 0.654 0

(11.957, 31.522) (-2.156, -0.032) (0.481, 0.89)

0.31 31:69 22.826 -0.726 0.648 0

(11.957, 31.522) (-2.308, -0.082) (0.475, 0.889)

0.32 8:17 22.826 -0.808 0.641 0

(11.957, 31.522) (-2.465, -0.133) (0.452, 0.887)

0.33 33:67 22.826 -0.892 0.634 0

(11.957, 31.522) (-2.627, -0.186) (0.435, 0.885)

0.34 17:33 22.826 -0.979 0.627 0

(11.957, 31.522) (-2.793, -0.24) (0.428, 0.883)

0.35 7:13 22.826 -1.069 0.619 0

(10.87, 31.522) (-2.965, -0.296) (0.401, 0.885)

0.36 9:16 22.826 -1.161 0.612 0

(10.87, 31.522) (-3.142, -0.354) (0.392, 0.882)

0.37 37:63 17.391 -1.256 0.675 0

(10.87, 31.522) (-3.325, -0.414) (0.383, 0.879)

0.38 19:31 17.391 -1.355 0.672 0

(10.87, 29.348) (-3.513, -0.476) (0.396, 0.876)

0.39 39:61 17.391 -1.456 0.67 0

(10.87, 29.348) (-3.708, -0.539) (0.386, 0.874)

0.4 2:3 17.391 -1.561 0.667 0

(10.87, 29.348) (-3.909, -0.605) (0.378, 0.877)

0.41 41:59 17.391 -1.67 0.664 0

(9.783, 29.348) (-4.117, -0.673) (0.368, 0.882)

0.42 21:29 17.391 -1.782 0.661 0

(9.783, 28.261) (-4.332, -0.743) (0.374, 0.882)

0.43 43:57 17.391 -1.898 0.657 0

(9.783, 28.261) (-4.555, -0.816) (0.366, 0.88)

0.44 11:14 17.391 -2.019 0.654 0

(9.783, 28.261) (-4.786, -0.892) (0.357, 0.879)

0.45 9:11 17.391 -2.144 0.651 0

(9.783, 27.174) (-5.025, -0.97) (0.354, 0.885)

0.46 23:27 17.391 -2.273 0.647 0

(9.783, 27.174) (-5.273, -1.051) (0.353, 0.882)

0.47 47:53 17.391 -2.407 0.643 0

(9.783, 27.174) (-5.53, -1.135) (0.348, 0.889)

0.48 12:13 17.391 -2.547 0.64 0

(9.783, 26.087) (-5.797, -1.222) (0.337, 0.887)

0.49 49:51 17.391 -2.691 0.636 0

(8.696, 26.087) (-6.075, -1.313) (0.339, 0.889)

0.5 1:1 17.391 -2.842 0.632 0

(8.696, 26.087) (-6.364, -1.407) (0.333, 0.895)

0.51 51:49 17.391 -2.999 0.627 0

(8.696, 26.087) (-6.664, -1.506) (0.345, 0.895)

0.52 13:12 17.391 -3.162 0.623 0

(8.696, 26.087) (-6.977, -1.608) (0.345, 0.895)

0.53 53:47 17.391 -3.333 0.618 0

(8.696, 25) (-7.304, -1.715) (0.321, 0.895)

0.54 27:23 17.391 -3.51 0.613 0

(8.696, 25) (-7.644, -1.826) (0.31, 0.895)

0.55 11:9 17.391 -3.696 0.608 0

(8.696, 25) (-8, -1.942) (0.304, 0.895)

0.56 14:11 17.391 -3.89 0.603 0

(8.696, 25) (-8.372, -2.064) (0.318, 0.895)

0.57 57:43 17.391 -4.093 0.597 0

(8.696, 25) (-8.761, -2.191) (0.317, 0.895)

0.58 29:21 17.391 -4.306 0.591 0

(8.696, 25) (-9.169, -2.325) (0.304, 0.895)

0.59 59:41 17.391 -4.529 0.585 0

(8.696, 25) (-9.596, -2.464) (0.316, 0.895)

0.6 3:2 17.391 -4.763 0.579 0

(8.696, 25) (-10.045, -2.611) (0.326, 0.895)

0.61 61:39 17.391 -5.009 0.572 0

(8.696, 25) (-10.517, -2.765) (0.318, 0.895)

0.62 31:19 17.391 -5.269 0.565 0

(8.696, 25) (-11.014, -2.928) (0.311, 0.895)

0.63 63:37 17.391 -5.542 0.558 0

(7.609, 25) (-11.538, -3.099) (0.311, 0.895)

0.64 16:9 17.391 -5.83 0.55 0

(7.609, 25) (-12.091, -3.28) (0.302, 0.895)

0.65 13:7 17.391 -6.135 0.541 0

(7.609, 23.913) (-12.675, -3.471) (0.316, 0.895)

0.66 33:17 17.391 -6.458 0.533 0

(7.609, 23.913) (-13.294, -3.673) (0.319, 0.895)

0.67 67:33 17.391 -6.801 0.523 0

(6.522, 23.913) (-13.95, -3.888) (0.314, 0.895)

0.68 17:8 15.217 -7.164 0.737 0

(6.522, 23.913) (-14.648, -4.116) (0.305, 0.895)

0.69 69:31 15.217 -7.552 0.737 0

(6.522, 23.913) (-15.39, -4.358) (0.303, 0.895)

0.7 7:3 15.217 -7.965 0.737 0

(6.522, 23.913) (-16.182, -4.617) (0.304, 0.905)

0.71 71:29 15.217 -8.407 0.737 0

(6.522, 23.913) (-17.028, -4.894) (0.3, 0.909)

0.72 18:7 15.217 -8.88 0.737 0

(6.522, 23.913) (-17.935, -5.19) (0.286, 0.917)

0.73 73:27 15.217 -9.388 0.737 0

(6.522, 22.826) (-18.909, -5.509) (0.279, 0.917)

0.74 37:13 15.217 -9.935 0.737 0

(6.522, 22.826) (-19.958, -5.852) (0.3, 0.913)

0.75 3:1 15.217 -10.526 0.737 0

(6.522, 22.826) (-21.091, -6.222) (0.3, 0.913)

0.76 19:6 15.217 -11.167 0.737 0

(5.435, 22.826) (-22.318, -6.623) (0.333, 0.909)

0.77 77:23 11.957 -11.863 0.579 0

(5.435, 22.826) (-23.652, -7.06) (0.332, 0.909)

0.78 39:11 11.957 -12.622 0.579 0

(5.435, 21.739) (-25.107, -7.535) (0.312, 0.909)

0.79 79:21 11.957 -13.454 0.579 0

(5.435, 21.739) (-26.701, -8.056) (0.312, 0.909)

0.8 4:1 11.957 -14.368 0.579 0

(4.348, 21.739) (-28.455, -8.63) (0.3, 0.909)

0.81 81:19 11.957 -15.38 0.579 0

(4.348, 21.739) (-30.392, -9.263) (0.286, 0.895)

0.82 41:9 11.957 -16.503 0.579 0

(4.348, 21.739) (-32.545, -9.967) (0.263, 0.895)

0.83 83:17 11.957 -17.759 0.579 0

(4.348, 21.739) (-34.952, -10.754) (0.227, 0.895)

0.84 21:4 11.957 -19.171 0.579 0

(3.261, 20.652) (-37.659, -11.639) (0.227, 0.895)

0.85 17:3 11.957 -20.772 0.579 0

(3.261, 20.652) (-40.727, -12.642) (0.222, 0.895)

0.86 43:7 11.957 -22.602 0.579 0

(3.261, 20.652) (-44.234, -13.788) (0.211, 0.867)

0.87 87:13 11.957 -24.713 0.579 0

(3.261, 19.565) (-48.28, -15.111) (0.178, 0.85)

0.88 22:3 11.957 -27.175 0.579 0

(3.261, 19.565) (-53, -16.654) (0.174, 0.842)

0.89 89:11 11.957 -30.086 0.579 0

(3.261, 19.565) (-58.579, -18.478) (0.167, 0.842)

0.9 9:1 7.609 -33.579 0.368 0

(3.261, 19.565) (-65.273, -20.667) (0.148, 0.842)

0.91 91:9 7.609 -37.848 0.368 0

(2.174, 19.565) (-73.455, -23.342) (0.133, 0.842)

0.92 23:2 7.609 -43.184 0.368 0

(2.174, 18.478) (-83.682, -26.685) (0.125, 0.833)

0.93 93:7 6.522 -50.045 0.316 0

(2.174, 18.478) (-96.831, -30.984) (0.105, 0.81)

0.94 47:3 6.522 -59.193 0.316 0

(2.174, 18.478) (-114.364, -36.716) (0.1, 0.781)

0.95 19:1 6.522 -72 0.316 0

(2.174, 16.304) (-138.909, -44.741) (0.105, 0.765)

0.96 24:1 6.522 -91.211 0.316 0

(1.087, 16.304) (-175.727, -56.778) (0.071, 0.737)

0.97 97:3 6.522 -123.228 0.316 0

(1.087, 15.217) (-237.091, -76.84) (0.067, 0.708)

0.98 49:1 4.348 -187.263 0.211 0

(1.087, 14.13) (-359.818, -116.963) (0.053, 0.682)

0.99 99:1 4.348 -379.368 0.211 0

(0, 10.87) (-728, -237.333) (0, 0.524)

1 Inf:1 0 NA NA NA

(0, 0) (NA, NA) (NA, NA)

---------------------------------------------------------------------------------------------

Internal Test cohort: Myocardial CT attenuation

> summary(DCA.ct\_test)

Standardized Net Benefit (95% Confidence Intervals):

-------------------------------------------------------------------------------------------

risk cost:benefit percent All Label ~ CT\_attenuation None

threshold ratio high risk

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0 0:1 100 1 1 0

(100, 100) (1, 1) (1, 1)

0.01 1:99 100 0.961 0.961 0

(98.913, 100) (0.933, 0.976) (0.933, 0.976)

0.02 1:49 100 0.922 0.922 0

(93.478, 100) (0.864, 0.951) (0.864, 0.951)

0.03 3:97 100 0.881 0.881 0

(85.87, 100) (0.794, 0.926) (0.772, 0.926)

0.04 1:24 100 0.84 0.84 0

(82.609, 100) (0.722, 0.9) (0.697, 0.9)

0.05 1:19 100 0.798 0.798 0

(78.261, 100) (0.649, 0.873) (0.632, 0.873)

0.06 3:47 100 0.755 0.755 0

(76.087, 100) (0.574, 0.846) (0.556, 0.846)

0.07 7:93 100 0.711 0.711 0

(72.826, 100) (0.498, 0.819) (0.49, 0.823)

0.08 2:23 100 0.666 0.666 0

(70.652, 100) (0.42, 0.791) (0.42, 0.801)

0.09 9:91 100 0.62 0.62 0

(66.304, 100) (0.341, 0.762) (0.322, 0.774)

0.1 1:9 100 0.573 0.573 0

(64.13, 100) (0.259, 0.733) (0.248, 0.744)

0.11 11:89 98.913 0.525 0.473 0

(59.783, 100) (0.176, 0.702) (0.163, 0.726)

0.12 3:22 96.739 0.476 0.438 0

(53.261, 100) (0.091, 0.672) (0.108, 0.703)

0.13 13:87 95.652 0.426 0.397 0

(40.217, 100) (0.004, 0.64) (0.06, 0.675)

0.14 7:43 93.478 0.375 0.365 0

(34.783, 100) (-0.085, 0.608) (0.051, 0.652)

0.15 3:17 86.957 0.322 0.31 0

(27.174, 100) (-0.176, 0.575) (0.005, 0.622)

0.16 4:21 82.609 0.268 0.241 0

(6.522, 100) (-0.27, 0.541) (-0.016, 0.593)

0.17 17:83 78.261 0.213 0.238 0

(2.174, 100) (-0.365, 0.507) (-0.044, 0.561)

0.18 9:41 71.739 0.157 0.136 0

(0, 100) (-0.463, 0.472) (-0.042, 0.538)

0.19 19:81 67.391 0.099 0.144 0

(0, 100) (-0.564, 0.435) (-0.085, 0.515)

0.2 1:4 63.043 0.039 0.158 0

(0, 100) (-0.667, 0.398) (-0.075, 0.508)

0.21 21:79 52.174 -0.021 0.128 0

(0, 100) (-0.772, 0.36) (-0.074, 0.502)

0.22 11:39 41.304 -0.084 0.246 0

(0, 100) (-0.88, 0.321) (-0.056, 0.494)

0.23 23:77 33.696 -0.148 -0.009 0

(0, 98.913) (-0.991, 0.281) (-0.079, 0.451)

0.24 6:19 21.739 -0.213 0.083 0

(0, 95.652) (-1.105, 0.24) (-0.077, 0.434)

0.25 1:3 15.217 -0.281 0.035 0

(0, 89.13) (-1.222, 0.198) (-0.071, 0.403)

0.26 13:37 8.696 -0.35 0.065 0

(0, 79.348) (-1.342, 0.154) (-0.104, 0.387)

0.27 27:73 4.348 -0.421 -0.006 0

(0, 70.652) (-1.466, 0.11) (-0.083, 0.358)

0.28 7:18 2.174 -0.494 0.032 0

(0, 66.304) (-1.593, 0.064) (-0.085, 0.343)

0.29 29:71 1.087 -0.569 0.053 0

(0, 58.696) (-1.723, 0.017) (-0.104, 0.34)

0.3 3:7 1.087 -0.647 0.053 0

(0, 52.174) (-1.857, -0.032) (-0.089, 0.33)

0.31 31:69 0 -0.726 0 0

(0, 46.739) (-1.995, -0.082) (-0.087, 0.274)

0.32 8:17 0 -0.808 0 0

(0, 44.565) (-2.137, -0.133) (-0.101, 0.277)

0.33 33:67 0 -0.892 0 0

(0, 41.304) (-2.284, -0.186) (-0.077, 0.256)

0.34 17:33 0 -0.979 0 0

(0, 38.043) (-2.434, -0.24) (-0.071, 0.242)

0.35 7:13 0 -1.069 0 0

(0, 33.696) (-2.59, -0.296) (-0.077, 0.244)

0.36 9:16 0 -1.161 0 0

(0, 29.348) (-2.75, -0.354) (-0.08, 0.232)

0.37 37:63 0 -1.256 0 0

(0, 26.087) (-2.915, -0.414) (-0.053, 0.235)

0.38 19:31 0 -1.355 0 0

(0, 23.913) (-3.086, -0.476) (-0.054, 0.227)

0.39 39:61 0 -1.456 0 0

(0, 19.565) (-3.262, -0.539) (-0.038, 0.194)

0.4 2:3 0 -1.561 0 0

(0, 19.565) (-3.444, -0.605) (-0.043, 0.176)

0.41 41:59 0 -1.67 0 0

(0, 15.217) (-3.633, -0.673) (-0.052, 0.186)

0.42 21:29 0 -1.782 0 0

(0, 11.957) (-3.828, -0.743) (-0.058, 0.172)

0.43 43:57 0 -1.898 0 0

(0, 10.87) (-4.029, -0.816) (-0.036, 0.158)

0.44 11:14 0 -2.019 0 0

(0, 9.783) (-4.238, -0.892) (-0.044, 0.15)

0.45 9:11 0 -2.144 0 0

(0, 9.783) (-4.455, -0.97) (-0.024, 0.15)

0.46 23:27 0 -2.273 0 0

(0, 7.609) (-4.679, -1.051) (0, 0.158)

0.47 47:53 0 -2.407 0 0

(0, 7.609) (-4.912, -1.135) (0, 0.15)

0.48 12:13 0 -2.547 0 0

(0, 7.609) (-5.154, -1.222) (0, 0.138)

0.49 49:51 0 -2.691 0 0

(0, 6.522) (-5.405, -1.313) (0, 0.136)

0.5 1:1 0 -2.842 0 0

(0, 5.435) (-5.667, -1.407) (0, 0.13)

0.51 51:49 0 -2.999 0 0

(0, 5.435) (-5.939, -1.506) (-0.002, 0.125)

0.52 13:12 0 -3.162 0 0

(0, 5.435) (-6.222, -1.608) (0, 0.125)

0.53 53:47 0 -3.333 0 0

(0, 4.348) (-6.518, -1.715) (0, 0.111)

0.54 27:23 0 -3.51 0 0

(0, 4.348) (-6.826, -1.826) (0, 0.105)

0.55 11:9 0 -3.696 0 0

(0, 3.261) (-7.148, -1.942) (0, 0.077)

0.56 14:11 0 -3.89 0 0

(0, 3.261) (-7.485, -2.064) (0, 0.08)

0.57 57:43 0 -4.093 0 0

(0, 2.174) (-7.837, -2.191) (0, 0.08)

0.58 29:21 0 -4.306 0 0

(0, 2.174) (-8.206, -2.325) (0, 0.08)

0.59 59:41 0 -4.529 0 0

(0, 2.174) (-8.593, -2.464) (0, 0.08)

0.6 3:2 0 -4.763 0 0

(0, 2.174) (-9, -2.611) (0, 0.08)

0.61 61:39 0 -5.009 0 0

(0, 2.174) (-9.427, -2.765) (0, 0.08)

0.62 31:19 0 -5.269 0 0

(0, 2.174) (-9.877, -2.928) (0, 0.08)

0.63 63:37 0 -5.542 0 0

(0, 2.174) (-10.351, -3.099) (0, 0.077)

0.64 16:9 0 -5.83 0 0

(0, 2.174) (-10.852, -3.28) (0, 0.065)

0.65 13:7 0 -6.135 0 0

(0, 1.087) (-11.381, -3.471) (0, 0.048)

0.66 33:17 0 -6.458 0 0

(0, 0) (-11.941, -3.673) (0, 0)

0.67 67:33 0 -6.801 0 0

(0, 0) (-12.535, -3.888) (0, 0)

0.68 17:8 0 -7.164 0 0

(0, 0) (-13.167, -4.116) (0, 0)

0.69 69:31 0 -7.552 0 0

(0, 0) (-13.839, -4.358) (0, 0)

0.7 7:3 0 -7.965 0 0

(0, 0) (-14.556, -4.617) (0, 0)

0.71 71:29 0 -8.407 0 0

(0, 0) (-15.322, -4.894) (0, 0)

0.72 18:7 0 -8.88 0 0

(0, 0) (-16.143, -5.19) (0, 0)

0.73 73:27 0 -9.388 0 0

(0, 0) (-17.025, -5.509) (0, 0)

0.74 37:13 0 -9.935 0 0

(0, 0) (-17.974, -5.852) (0, 0)

0.75 3:1 0 -10.526 0 0

(0, 0) (-19, -6.222) (0, 0)

0.76 19:6 0 -11.167 0 0

(0, 0) (-20.111, -6.623) (0, 0)

0.77 77:23 0 -11.863 0 0

(0, 0) (-21.319, -7.06) (0, 0)

0.78 39:11 0 -12.622 0 0

(0, 0) (-22.636, -7.535) (0, 0)

0.79 79:21 0 -13.454 0 0

(0, 0) (-24.079, -8.056) (0, 0)

0.8 4:1 0 -14.368 0 0

(0, 0) (-25.667, -8.63) (0, 0)

0.81 81:19 0 -15.38 0 0

(0, 0) (-27.421, -9.263) (0, 0)

0.82 41:9 0 -16.503 0 0

(0, 0) (-29.37, -9.967) (0, 0)

0.83 83:17 0 -17.759 0 0

(0, 0) (-31.549, -10.754) (0, 0)

0.84 21:4 0 -19.171 0 0

(0, 0) (-34, -11.639) (0, 0)

0.85 17:3 0 -20.772 0 0

(0, 0) (-36.778, -12.642) (0, 0)

0.86 43:7 0 -22.602 0 0

(0, 0) (-39.952, -13.788) (0, 0)

0.87 87:13 0 -24.713 0 0

(0, 0) (-43.615, -15.111) (0, 0)

0.88 22:3 0 -27.175 0 0

(0, 0) (-47.889, -16.654) (0, 0)

0.89 89:11 0 -30.086 0 0

(0, 0) (-52.939, -18.478) (0, 0)

0.9 9:1 0 -33.579 0 0

(0, 0) (-59, -20.667) (0, 0)

0.91 91:9 0 -37.848 0 0

(0, 0) (-66.407, -23.342) (0, 0)

0.92 23:2 0 -43.184 0 0

(0, 0) (-75.667, -26.685) (0, 0)

0.93 93:7 0 -50.045 0 0

(0, 0) (-87.571, -30.984) (0, 0)

0.94 47:3 0 -59.193 0 0

(0, 0) (-103.444, -36.716) (0, 0)

0.95 19:1 0 -72 0 0

(0, 0) (-125.667, -44.741) (0, 0)

0.96 24:1 0 -91.211 0 0

(0, 0) (-159, -56.778) (0, 0)

0.97 97:3 0 -123.228 0 0

(0, 0) (-214.556, -76.84) (0, 0)

0.98 49:1 0 -187.263 0 0

(0, 0) (-325.667, -116.963) (0, 0)

0.99 99:1 0 -379.368 0 0

(0, 0) (-659, -237.333) (0, 0)

1 Inf:1 0 NA NA NA

(0, 0) (NA, NA) (NA, NA)

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External Test cohort: RF model

> summary(DCA.RF\_vali)

Standardized Net Benefit (95% Confidence Intervals):

--------------------------------------------------------------------------------------------

risk cost:benefit percent All Label ~ RFmodel None

threshold ratio high risk

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0 0:1 100 1 1 0

(100, 100) (1, 1) (1, 1)

0.01 1:99 100 0.973 0.973 0

(67.143, 100) (0.951, 0.984) (0.951, 0.985)

0.02 1:49 100 0.945 0.945 0

(54.286, 100) (0.901, 0.967) (0.911, 0.977)

0.03 3:97 100 0.917 0.917 0

(48.571, 100) (0.851, 0.951) (0.885, 0.971)

0.04 1:24 77.143 0.888 0.923 0

(44.286, 100) (0.799, 0.934) (0.859, 0.967)

0.05 1:19 72.857 0.859 0.911 0

(41.429, 100) (0.746, 0.916) (0.836, 0.962)

0.06 3:47 58.571 0.829 0.926 0

(37.143, 100) (0.691, 0.898) (0.829, 0.957)

0.07 7:93 58.571 0.798 0.913 0

(34.286, 100) (0.636, 0.88) (0.814, 0.952)

0.08 2:23 58.571 0.767 0.899 0

(32.857, 100) (0.58, 0.862) (0.797, 0.947)

0.09 9:91 58.571 0.735 0.885 0

(30, 81.429) (0.522, 0.842) (0.768, 0.942)

0.1 1:9 54.286 0.702 0.889 0

(28.571, 77.143) (0.463, 0.823) (0.741, 0.939)

0.11 11:89 54.286 0.668 0.876 0

(27.143, 74.286) (0.403, 0.803) (0.689, 0.936)

0.12 3:22 52.857 0.634 0.871 0

(25.714, 70) (0.341, 0.783) (0.636, 0.932)

0.13 13:87 52.857 0.599 0.858 0

(24.286, 70) (0.278, 0.762) (0.601, 0.925)

0.14 7:43 47.143 0.563 0.819 0

(24.286, 68.571) (0.213, 0.741) (0.586, 0.919)

0.15 3:17 47.143 0.526 0.808 0

(22.857, 65.714) (0.147, 0.719) (0.549, 0.915)

0.16 4:21 34.286 0.489 0.699 0

(22.857, 64.286) (0.079, 0.697) (0.527, 0.909)

0.17 17:83 34.286 0.45 0.692 0

(21.429, 64.286) (0.01, 0.674) (0.497, 0.904)

0.18 9:41 34.286 0.411 0.685 0

(21.429, 62.857) (-0.061, 0.65) (0.48, 0.901)

0.19 19:81 34.286 0.37 0.678 0

(21.429, 61.429) (-0.134, 0.626) (0.464, 0.896)

0.2 1:4 32.857 0.329 0.684 0

(21.429, 60) (-0.208, 0.602) (0.438, 0.885)

0.21 21:79 32.857 0.286 0.678 0

(20, 58.571) (-0.285, 0.577) (0.426, 0.877)

0.22 11:39 32.857 0.243 0.671 0

(20, 57.143) (-0.363, 0.551) (0.408, 0.865)

0.23 23:77 30 0.198 0.627 0

(20, 55.714) (-0.444, 0.524) (0.394, 0.857)

0.24 6:19 30 0.152 0.62 0

(20, 52.857) (-0.526, 0.497) (0.385, 0.854)

0.25 1:3 30 0.105 0.614 0

(20, 50) (-0.611, 0.469) (0.375, 0.848)

0.26 13:37 30 0.057 0.607 0

(20, 48.571) (-0.698, 0.44) (0.362, 0.838)

0.27 27:73 30 0.007 0.601 0

(20, 47.143) (-0.788, 0.411) (0.348, 0.835)

0.28 7:18 30 -0.044 0.594 0

(18.571, 42.857) (-0.88, 0.381) (0.333, 0.833)

0.29 29:71 30 -0.096 0.586 0

(18.571, 42.857) (-0.974, 0.35) (0.323, 0.831)

0.3 3:7 30 -0.15 0.579 0

(18.571, 42.857) (-1.071, 0.317) (0.311, 0.815)

0.31 31:69 30 -0.206 0.571 0

(18.571, 41.429) (-1.171, 0.284) (0.298, 0.804)

0.32 8:17 30 -0.263 0.563 0

(18.571, 41.429) (-1.275, 0.251) (0.284, 0.799)

0.33 33:67 30 -0.322 0.555 0

(17.143, 41.429) (-1.381, 0.216) (0.273, 0.801)

0.34 17:33 30 -0.383 0.547 0

(17.143, 40) (-1.49, 0.18) (0.264, 0.799)

0.35 7:13 30 -0.445 0.538 0

(17.143, 40) (-1.603, 0.142) (0.25, 0.801)

0.36 9:16 30 -0.51 0.53 0

(17.143, 40) (-1.719, 0.104) (0.236, 0.794)

0.37 37:63 30 -0.576 0.52 0

(17.143, 40) (-1.839, 0.065) (0.232, 0.793)

0.38 19:31 30 -0.645 0.511 0

(15.714, 40) (-1.962, 0.024) (0.237, 0.788)

0.39 39:61 30 -0.716 0.501 0

(15.714, 40) (-2.09, -0.018) (0.229, 0.783)

0.4 2:3 30 -0.789 0.491 0

(15.714, 40) (-2.222, -0.062) (0.222, 0.778)

0.41 41:59 30 -0.865 0.481 0

(15.714, 40) (-2.359, -0.107) (0.218, 0.775)

0.42 21:29 30 -0.944 0.47 0

(15.714, 40) (-2.5, -0.153) (0.195, 0.777)

0.43 43:57 30 -1.025 0.459 0

(14.286, 40) (-2.646, -0.201) (0.181, 0.773)

0.44 11:14 30 -1.109 0.447 0

(14.286, 38.571) (-2.798, -0.251) (0.167, 0.777)

0.45 9:11 30 -1.196 0.435 0

(14.286, 38.571) (-2.955, -0.303) (0.144, 0.773)

0.46 23:27 30 -1.287 0.423 0

(14.286, 38.571) (-3.117, -0.357) (0.126, 0.769)

0.47 47:53 24.286 -1.38 0.597 0

(12.857, 38.571) (-3.286, -0.412) (0.047, 0.764)

0.48 12:13 24.286 -1.478 0.591 0

(12.857, 38.571) (-3.462, -0.47) (0.029, 0.76)

0.49 49:51 24.286 -1.579 0.585 0

(11.429, 38.571) (-3.644, -0.53) (0.013, 0.766)

0.5 1:1 24.286 -1.684 0.579 0

(11.429, 38.571) (-3.833, -0.593) (0, 0.762)

0.51 51:49 24.286 -1.794 0.573 0

(11.429, 37.143) (-4.031, -0.658) (-0.015, 0.76)

0.52 13:12 24.286 -1.908 0.566 0

(11.429, 37.143) (-4.236, -0.725) (-0.03, 0.76)

0.53 53:47 24.286 -2.027 0.559 0

(11.429, 37.143) (-4.45, -0.796) (-0.046, 0.761)

0.54 27:23 24.286 -2.151 0.551 0

(10, 35.714) (-4.674, -0.87) (-0.062, 0.758)

0.55 11:9 24.286 -2.281 0.544 0

(10, 35.714) (-4.907, -0.947) (-0.083, 0.753)

0.56 14:11 21.429 -2.416 0.431 0

(8.571, 34.286) (-5.152, -1.027) (-0.109, 0.749)

0.57 57:43 21.429 -2.558 0.422 0

(8.571, 34.286) (-5.407, -1.111) (-0.141, 0.76)

0.58 29:21 21.429 -2.707 0.414 0

(8.571, 34.286) (-5.675, -1.199) (-0.156, 0.755)

0.59 59:41 21.429 -2.863 0.404 0

(8.571, 34.286) (-5.955, -1.292) (-0.176, 0.756)

0.6 3:2 21.429 -3.026 0.395 0

(8.571, 34.286) (-6.25, -1.389) (-0.187, 0.76)

0.61 61:39 17.143 -3.198 0.227 0

(7.143, 34.286) (-6.56, -1.491) (-0.204, 0.747)

0.62 31:19 17.143 -3.38 0.216 0

(7.143, 34.286) (-6.886, -1.598) (-0.211, 0.744)

0.63 63:37 17.143 -3.57 0.205 0

(7.143, 32.857) (-7.23, -1.712) (-0.228, 0.741)

0.64 16:9 17.143 -3.772 0.193 0

(5.714, 32.857) (-7.593, -1.831) (-0.241, 0.735)

0.65 13:7 17.143 -3.985 0.18 0

(5.714, 31.429) (-7.976, -1.958) (-0.261, 0.737)

0.66 33:17 17.143 -4.211 0.167 0

(4.286, 31.429) (-8.382, -2.092) (-0.269, 0.737)

0.67 67:33 17.143 -4.45 0.153 0

(4.286, 31.429) (-8.813, -2.233) (-0.259, 0.735)

0.68 17:8 17.143 -4.704 0.138 0

(2.857, 31.429) (-9.271, -2.384) (-0.271, 0.73)

0.69 69:31 17.143 -4.975 0.122 0

(2.857, 30) (-9.758, -2.545) (-0.278, 0.722)

0.7 7:3 17.143 -5.263 0.105 0

(2.857, 30) (-10.278, -2.716) (-0.296, 0.704)

0.71 71:29 17.143 -5.572 0.087 0

(2.857, 30) (-10.833, -2.899) (-0.314, 0.693)

0.72 18:7 15.714 -5.902 0.015 0

(2.857, 30) (-11.429, -3.095) (-0.321, 0.685)

0.73 73:27 15.714 -6.257 -0.006 0

(2.857, 28.571) (-12.068, -3.306) (-0.326, 0.684)

0.74 37:13 15.714 -6.64 -0.028 0

(1.429, 28.571) (-12.756, -3.533) (-0.337, 0.674)

0.75 3:1 15.714 -7.053 -0.053 0

(1.429, 28.571) (-13.5, -3.778) (-0.364, 0.667)

0.76 19:6 15.714 -7.5 -0.079 0

(1.429, 27.143) (-14.306, -4.043) (-0.378, 0.66)

0.77 77:23 15.714 -7.986 -0.108 0

(1.429, 27.143) (-15.181, -4.332) (-0.403, 0.636)

0.78 39:11 15.714 -8.517 -0.139 0

(1.429, 25.714) (-16.136, -4.646) (-0.399, 0.628)

0.79 79:21 7.143 -9.098 0.013 0

(1.429, 25.714) (-17.183, -4.991) (-0.411, 0.619)

0.8 4:1 7.143 -9.737 0 0

(0, 25.714) (-18.333, -5.37) (-0.438, 0.611)

0.81 81:19 7.143 -10.443 -0.014 0

(0, 24.286) (-19.605, -5.789) (-0.479, 0.6)

0.82 41:9 7.143 -11.228 -0.029 0

(0, 24.286) (-21.019, -6.255) (-0.507, 0.579)

0.83 83:17 7.143 -12.105 -0.046 0

(0, 22.857) (-22.598, -6.776) (-0.514, 0.56)

0.84 21:4 7.143 -13.092 -0.066 0

(0, 22.857) (-24.375, -7.361) (-0.553, 0.556)

0.85 17:3 7.143 -14.211 -0.088 0

(0, 21.429) (-26.389, -8.025) (-0.544, 0.538)

0.86 43:7 7.143 -15.489 -0.113 0

(0, 21.429) (-28.69, -8.783) (-0.518, 0.524)

0.87 87:13 7.143 -16.964 -0.142 0

(0, 21.429) (-31.346, -9.658) (-0.521, 0.5)

0.88 22:3 4.286 -18.684 0.158 0

(0, 20) (-34.444, -10.679) (-0.53, 0.5)

0.89 89:11 4.286 -20.718 0.158 0

(0, 20) (-38.106, -11.886) (-0.573, 0.5)

0.9 9:1 4.286 -23.158 0.158 0

(0, 20) (-42.5, -13.333) (-0.5, 0.48)

0.91 91:9 4.286 -26.14 0.158 0

(0, 18.571) (-47.87, -15.103) (-0.579, 0.462)

0.92 23:2 4.286 -29.868 0.158 0

(0, 17.143) (-54.583, -17.315) (-0.519, 0.444)

0.93 93:7 4.286 -34.662 0.158 0

(0, 15.714) (-63.214, -20.159) (-0.518, 0.438)

0.94 47:3 4.286 -41.053 0.158 0

(0, 14.286) (-74.722, -23.951) (-0.603, 0.391)

0.95 19:1 4.286 -50 0.158 0

(0, 12.857) (-90.833, -29.259) (-0.714, 0.375)

0.96 24:1 0 -63.421 0 0

(0, 11.429) (-115, -37.222) (-0.556, 0.364)

0.97 97:3 0 -85.789 0 0

(0, 10) (-155.278, -50.494) (0, 0.316)

0.98 49:1 0 -130.526 0 0

(0, 8.571) (-235.833, -77.037) (0, 0.28)

0.99 99:1 0 -264.737 0 0

(0, 7.143) (-477.5, -156.667) (0, 0.235)

1 Inf:1 0 NA NA NA

(0, 0) (NA, NA) (NA, NA)

--------------------------------------------------------------------------------------------

External Test cohort: Myocardial CT attenuation

> summary(DCA.ct\_vali)

Standardized Net Benefit (95% Confidence Intervals):

------------------------------------------------------------------------------------------

risk cost:benefit percent All Label ~ CT\_ attenuation None

threshold ratio high risk

----------- -------------- --------------- --------------------- ------------------ ------

0 0:1 100 1 1 0

(100, 100) (1, 1) (1, 1)

0.01 1:99 100 0.973 0.973 0

(100, 100) (0.951, 0.983) (0.951, 0.983)

0.02 1:49 100 0.945 0.945 0

(100, 100) (0.901, 0.965) (0.901, 0.965)

0.03 3:97 100 0.917 0.917 0

(100, 100) (0.851, 0.948) (0.851, 0.948)

0.04 1:24 100 0.888 0.888 0

(100, 100) (0.799, 0.929) (0.799, 0.929)

0.05 1:19 100 0.859 0.859 0

(100, 100) (0.746, 0.911) (0.746, 0.911)

0.06 3:47 100 0.829 0.829 0

(100, 100) (0.691, 0.892) (0.691, 0.892)

0.07 7:93 100 0.798 0.798 0

(94.286, 100) (0.636, 0.873) (0.636, 0.873)

0.08 2:23 100 0.767 0.767 0

(91.429, 100) (0.58, 0.853) (0.58, 0.853)

0.09 9:91 100 0.735 0.735 0

(84.286, 100) (0.522, 0.833) (0.522, 0.833)

0.1 1:9 100 0.702 0.702 0

(80, 100) (0.463, 0.812) (0.463, 0.812)

0.11 11:89 100 0.668 0.668 0

(72.857, 100) (0.403, 0.791) (0.403, 0.791)

0.12 3:22 100 0.634 0.634 0

(65.714, 100) (0.341, 0.769) (0.341, 0.778)

0.13 13:87 100 0.599 0.599 0

(60, 100) (0.278, 0.747) (0.29, 0.762)

0.14 7:43 100 0.563 0.563 0

(54.286, 100) (0.213, 0.725) (0.281, 0.741)

0.15 3:17 100 0.526 0.526 0

(47.143, 100) (0.147, 0.701) (0.218, 0.719)

0.16 4:21 100 0.489 0.489 0

(34.286, 100) (0.079, 0.678) (0.143, 0.714)

0.17 17:83 100 0.45 0.45 0

(27.143, 100) (0.01, 0.653) (0.075, 0.693)

0.18 9:41 97.143 0.411 0.434 0

(24.286, 100) (-0.061, 0.629) (0.013, 0.671)

0.19 19:81 92.857 0.37 0.432 0

(21.429, 100) (-0.134, 0.603) (-0.004, 0.66)

0.2 1:4 88.571 0.329 0.434 0

(14.286, 100) (-0.208, 0.577) (-0.042, 0.65)

0.21 21:79 80 0.286 0.416 0

(5.714, 100) (-0.285, 0.55) (-0.071, 0.629)

0.22 11:39 78.571 0.243 0.398 0

(2.857, 100) (-0.363, 0.523) (-0.051, 0.609)

0.23 23:77 67.143 0.198 0.423 0

(0, 100) (-0.444, 0.495) (-0.084, 0.602)

0.24 6:19 61.429 0.152 0.324 0

(0, 100) (-0.526, 0.466) (-0.086, 0.569)

0.25 1:3 52.857 0.105 0.193 0

(0, 100) (-0.611, 0.436) (-0.089, 0.567)

0.26 13:37 48.571 0.057 0.154 0

(0, 100) (-0.698, 0.405) (-0.096, 0.558)

0.27 27:73 38.571 0.007 0.123 0

(0, 100) (-0.788, 0.374) (-0.113, 0.535)

0.28 7:18 30 -0.044 0.082 0

(0, 100) (-0.88, 0.342) (-0.094, 0.509)

0.29 29:71 27.143 -0.096 0.036 0

(0, 100) (-0.974, 0.309) (-0.104, 0.489)

0.3 3:7 25.714 -0.15 0.045 0

(0, 100) (-1.071, 0.275) (-0.111, 0.467)

0.31 31:69 21.429 -0.206 0.027 0

(0, 97.143) (-1.171, 0.24) (-0.114, 0.397)

0.32 8:17 21.429 -0.263 0.015 0

(0, 94.286) (-1.275, 0.204) (-0.111, 0.402)

0.33 33:67 17.143 -0.322 0.003 0

(0, 85.714) (-1.381, 0.166) (-0.115, 0.343)

0.34 17:33 15.714 -0.383 0.021 0

(0, 80) (-1.49, 0.128) (-0.119, 0.33)

0.35 7:13 14.286 -0.445 0.04 0

(0, 67.143) (-1.603, 0.089) (-0.117, 0.317)

0.36 9:16 14.286 -0.51 0.033 0

(0, 45.714) (-1.719, 0.048) (-0.125, 0.289)

0.37 37:63 11.429 -0.576 0.087 0

(0, 38.571) (-1.839, 0.006) (-0.117, 0.261)

0.38 19:31 11.429 -0.645 0.081 0

(0, 35.714) (-1.962, -0.037) (-0.123, 0.229)

0.39 39:61 7.143 -0.716 0.004 0

(0, 32.857) (-2.09, -0.082) (-0.118, 0.219)

0.4 2:3 5.714 -0.789 0.035 0

(0, 30) (-2.222, -0.128) (-0.121, 0.227)

0.41 41:59 5.714 -0.865 0.032 0

(0, 27.143) (-2.359, -0.176) (-0.123, 0.222)

0.42 21:29 2.857 -0.944 0.015 0

(0, 25.714) (-2.5, -0.225) (-0.128, 0.208)

0.43 43:57 2.857 -1.025 0.013 0

(0, 25.714) (-2.646, -0.277) (-0.108, 0.21)

0.44 11:14 2.857 -1.109 0.011 0

(0, 24.286) (-2.798, -0.33) (-0.112, 0.211)

0.45 9:11 1.429 -1.196 -0.043 0

(0, 24.286) (-2.955, -0.385) (-0.114, 0.205)

0.46 23:27 1.429 -1.287 -0.045 0

(0, 22.857) (-3.117, -0.442) (-0.114, 0.205)

0.47 47:53 1.429 -1.38 -0.047 0

(0, 21.429) (-3.286, -0.501) (-0.111, 0.211)

0.48 12:13 1.429 -1.478 -0.049 0

(0, 21.429) (-3.462, -0.562) (-0.115, 0.192)

0.49 49:51 1.429 -1.579 -0.051 0

(0, 18.571) (-3.644, -0.626) (-0.12, 0.181)

0.5 1:1 1.429 -1.684 -0.053 0

(0, 18.571) (-3.833, -0.692) (-0.125, 0.188)

0.51 51:49 1.429 -1.794 -0.055 0

(0, 18.571) (-4.031, -0.761) (-0.13, 0.187)

0.52 13:12 1.429 -1.908 -0.057 0

(0, 17.143) (-4.236, -0.833) (-0.127, 0.188)

0.53 53:47 1.429 -2.027 -0.059 0

(0, 15.714) (-4.45, -0.908) (-0.125, 0.194)

0.54 27:23 1.429 -2.151 -0.062 0

(0, 15.714) (-4.674, -0.987) (-0.13, 0.212)

0.55 11:9 1.429 -2.281 -0.064 0

(0, 14.286) (-4.907, -1.068) (-0.131, 0.204)

0.56 14:11 1.429 -2.416 -0.067 0

(0, 14.286) (-5.152, -1.154) (-0.121, 0.196)

0.57 57:43 1.429 -2.558 -0.07 0

(0, 14.286) (-5.407, -1.243) (-0.133, 0.19)

0.58 29:21 1.429 -2.707 -0.073 0

(0, 12.857) (-5.675, -1.337) (-0.138, 0.19)

0.59 59:41 1.429 -2.863 -0.076 0

(0, 12.857) (-5.955, -1.435) (-0.137, 0.177)

0.6 3:2 1.429 -3.026 -0.079 0

(0, 12.857) (-6.25, -1.538) (-0.13, 0.19)

0.61 61:39 0 -3.198 0 0

(0, 11.429) (-6.56, -1.647) (-0.136, 0.176)

0.62 31:19 0 -3.38 0 0

(0, 11.429) (-6.886, -1.761) (-0.136, 0.174)

0.63 63:37 0 -3.57 0 0

(0, 11.429) (-7.23, -1.881) (-0.142, 0.176)

0.64 16:9 0 -3.772 0 0

(0, 11.429) (-7.593, -2.009) (-0.142, 0.174)

0.65 13:7 0 -3.985 0 0

(0, 8.571) (-7.976, -2.143) (-0.149, 0.167)

0.66 33:17 0 -4.211 0 0

(0, 7.143) (-8.382, -2.285) (-0.149, 0.176)

0.67 67:33 0 -4.45 0 0

(0, 7.143) (-8.813, -2.436) (-0.156, 0.167)

0.68 17:8 0 -4.704 0 0

(0, 5.714) (-9.271, -2.596) (-0.152, 0.16)

0.69 69:31 0 -4.975 0 0

(0, 5.714) (-9.758, -2.767) (-0.159, 0.132)

0.7 7:3 0 -5.263 0 0

(0, 5.714) (-10.278, -2.949) (-0.167, 0.118)

0.71 71:29 0 -5.572 0 0

(0, 4.286) (-10.833, -3.143) (-0.153, 0.095)

0.72 18:7 0 -5.902 0 0

(0, 2.857) (-11.429, -3.352) (-0.161, 0.091)

0.73 73:27 0 -6.257 0 0

(0, 2.857) (-12.068, -3.575) (-0.169, 0.072)

0.74 37:13 0 -6.64 0 0

(0, 2.857) (-12.756, -3.817) (-0.167, 0.087)

0.75 3:1 0 -7.053 0 0

(0, 2.857) (-13.5, -4.077) (-0.167, 0.05)

0.76 19:6 0 -7.5 0 0

(0, 2.857) (-14.306, -4.359) (-0.176, 0.045)

0.77 77:23 0 -7.986 0 0

(0, 1.429) (-15.181, -4.666) (-0.176, 0.045)

0.78 39:11 0 -8.517 0 0

(0, 1.429) (-16.136, -5) (-0.154, 0.042)

0.79 79:21 0 -9.098 0 0

(0, 1.429) (-17.183, -5.366) (-0.157, 0)

0.8 4:1 0 -9.737 0 0

(0, 1.429) (-18.333, -5.769) (-0.154, 0)

0.81 81:19 0 -10.443 0 0

(0, 1.429) (-19.605, -6.215) (-0.06, 0)

0.82 41:9 0 -11.228 0 0

(0, 1.429) (-21.019, -6.709) (0, 0)

0.83 83:17 0 -12.105 0 0

(0, 1.429) (-22.598, -7.262) (0, 0)

0.84 21:4 0 -13.092 0 0

(0, 1.429) (-24.375, -7.885) (0, 0)

0.85 17:3 0 -14.211 0 0

(0, 1.429) (-26.389, -8.59) (0, 0)

0.86 43:7 0 -15.489 0 0

(0, 0) (-28.69, -9.396) (0, 0)

0.87 87:13 0 -16.964 0 0

(0, 0) (-31.346, -10.325) (0, 0)

0.88 22:3 0 -18.684 0 0

(0, 0) (-34.444, -11.41) (0, 0)

0.89 89:11 0 -20.718 0 0

(0, 0) (-38.106, -12.692) (0, 0)

0.9 9:1 0 -23.158 0 0

(0, 0) (-42.5, -14.231) (0, 0)

0.91 91:9 0 -26.14 0 0

(0, 0) (-47.87, -16.111) (0, 0)

0.92 23:2 0 -29.868 0 0

(0, 0) (-54.583, -18.462) (0, 0)

0.93 93:7 0 -34.662 0 0

(0, 0) (-63.214, -21.484) (0, 0)

0.94 47:3 0 -41.053 0 0

(0, 0) (-74.722, -25.513) (0, 0)

0.95 19:1 0 -50 0 0

(0, 0) (-90.833, -31.154) (0, 0)

0.96 24:1 0 -63.421 0 0

(0, 0) (-115, -39.615) (0, 0)

0.97 97:3 0 -85.789 0 0

(0, 0) (-155.278, -53.718) (0, 0)

0.98 49:1 0 -130.526 0 0

(0, 0) (-235.833, -81.923) (0, 0)

0.99 99:1 0 -264.737 0 0

(0, 0) (-477.5, -166.538) (0, 0)

1 Inf:1 0 NA NA NA

(0, 0) (NA, NA) (NA, NA)

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