

Additional file 4. Individual decision tree models predicting HRQoL parameters based on miRNA expression



Overall Quality of Life

Node 0	
Mean	78,332
Std. Dev.	13,978
n	74
%	100,0
Predicted	78,332

miR-181a

Improvement=30,238

$\leq -1,666$ $> -1,666$

Node 1	
Mean	71,674
Std. Dev.	14,595
n	28
%	37,8
Predicted	71,674

Node 2	
Mean	82,385
Std. Dev.	12,031
n	46
%	62,2
Predicted	82,385

miR-221

Improvement=23,030

$\leq -3,959$ $> -3,959$

Node 3	
Mean	80,055
Std. Dev.	9,868
n	13
%	17,6
Predicted	80,055

Node 4	
Mean	64,411
Std. Dev.	14,340
n	15
%	20,3
Predicted	64,411



Psychomotor Speed

Node 0	
Mean	39,552
Std. Dev.	16,682
n	68
%	100,0
Predicted	39,552

miR-335

Improvement=72,200

$\leq -1,346$ $> -1,346$

Node 1	
Mean	0,000
Std. Dev.	0,000
n	3
%	4,4
Predicted	0,000

Node 2	
Mean	41,377
Std. Dev.	14,650
n	65
%	95,6
Predicted	41,377

miR-221

Improvement=45,181

$\leq -2,661$ $> -2,661$

Node 3	
Mean	44,133
Std. Dev.	12,306
n	56
%	82,4
Predicted	44,133

Node 4	
Mean	24,228
Std. Dev.	17,086
n	9
%	13,2
Predicted	24,228



Delayed Recall

Node 0	
Mean	28,446
Std. Dev.	10,859
n	74
%	100,0
Predicted	28,446

miR-143

Improvement=13,538

$\leq 1,459$ $> 1,459$

Node 1	
Mean	30,685
Std. Dev.	11,554
n	54
%	73,0
Predicted	30,685

Node 2	
Mean	22,400
Std. Dev.	5,286
n	20
%	27,0
Predicted	22,400



Cumulative Learning

Node 0	
Mean	30,041
Std. Dev.	10,195
n	74
%	100,0
Predicted	30,041

miR-10

Improvement=12,214

$\leq -6,857$ $> -6,857$

Node 1	
Mean	34,852
Std. Dev.	10,946
n	27
%	36,5
Predicted	34,852

miR-30b

Improvement=17,199

$\leq 4,806$ $> 4,806$

Node 3	
Mean	40,118
Std. Dev.	10,265
n	17
%	23,0
Predicted	40,118

Node 4	
Mean	25,900
Std. Dev.	4,175
n	10
%	13,5
Predicted	25,900

Node 2	
Mean	27,277
Std. Dev.	8,707
n	47
%	63,5
Predicted	27,277

miR-181a

Improvement=12,584

$\leq -1,846$ $> -1,846$

Node 5	
Mean	34,133
Std. Dev.	8,601
n	15
%	20,3
Predicted	34,133

Node 6	
Mean	24,062
Std. Dev.	6,758
n	32
%	43,2
Predicted	24,062



Tumor Related Symptoms

Node 0	
Mean	20,704
Std. Dev.	12,608
n	74
%	100,0
Predicted	20,704

miR-221

Improvement=26,403

$\leq -3,219$

$> -3,219$

Node 1	
Mean	17,362
Std. Dev.	10,341
n	52
%	70,3
Predicted	17,362

miR-34a

Improvement=17,616

Node 2	
Mean	28,604
Std. Dev.	14,136
n	22
%	29,7
Predicted	28,604

miR-193a

Improvement=14,251

$\leq -0,642$

$> -0,642$

$\leq -4,404$

$> -4,404$

Node 3	
Mean	29,104
Std. Dev.	15,561
n	8
%	10,8
Predicted	29,104

Node 4	
Mean	15,227
Std. Dev.	7,557
n	44
%	59,5
Predicted	15,227

Node 5	
Mean	18,469
Std. Dev.	6,186
n	7
%	9,5
Predicted	18,469

Node 6	
Mean	33,333
Std. Dev.	14,423
n	15
%	20,3
Predicted	33,333

miR-335

Improvement=4,703

$\leq 1,018$

$> 1,018$

Node 7	
Mean	12,539
Std. Dev.	8,007
n	23
%	31,1
Predicted	12,539

miR-143

Improvement=10,311

Node 8	
Mean	18,170
Std. Dev.	5,904
n	21
%	28,4
Predicted	18,170

$\leq -1,103$

$> -1,103$

Node 9	
Mean	21,247
Std. Dev.	7,203
n	7
%	9,5
Predicted	21,247

Node 10	
Mean	8,729
Std. Dev.	4,733
n	16
%	21,6
Predicted	8,729



Depression

Node 0	
Mean	15,425
Std. Dev.	5,666
n	73
%	100,0
Predicted	15,425

miR-181a

Improvement=3,182

$\leq -1,666$

$> -1,666$

Node 1	
Mean	18,071
Std. Dev.	6,955
n	28
%	38,4
Predicted	18,071

Node 2	
Mean	13,778
Std. Dev.	3,954
n	45
%	61,6
Predicted	13,778



Executive Functions

Node 0	
Mean	37,273
Std. Dev.	18,669
n	68
%	100,0
Predicted	37,273

miR-193a

Improvement=71,755

$\leq -3,131$

$> -3,131$

Node 1	
Mean	42,163
Std. Dev.	15,892
n	51
%	75,0
Predicted	42,163

Node 2	
Mean	22,601
Std. Dev.	19,113
n	17
%	25,0
Predicted	22,601



Verbal Fluency

Node 0	
Mean	35,095
Std. Dev.	8,439
n	74
%	100,0
Predicted	35,095

miR-17

Improvement=9,636

$\leq 1,392$

$> 1,392$

Node 1	
Mean	38,371
Std. Dev.	7,289
n	35
%	47,3
Predicted	38,371

miR-10

Improvement=5,099

Node 2	
Mean	32,154
Std. Dev.	8,397
n	39
%	52,7
Predicted	32,154

miR-200c

Improvement=7,054

$\leq -8,995$

$> -8,995$

$\leq -3,894$

$> -3,894$

Node 3	
Mean	32,889
Std. Dev.	6,274
n	9
%	12,2
Predicted	32,889

Node 4	
Mean	40,269
Std. Dev.	6,715
n	26
%	35,1
Predicted	40,269

miR-21

Improvement=6,814

Node 5	
Mean	28,118
Std. Dev.	8,418
n	17
%	23,0
Predicted	28,118

miR-139

Improvement=7,617

Node 6	
Mean	35,273
Std. Dev.	7,086
n	22
%	29,7
Predicted	35,273

$\leq 2,657$

$> 2,657$

$\leq -3,460$

$> -3,460$

Node 7	
Mean	46,875
Std. Dev.	5,743
n	8
%	10,8
Predicted	46,875

Node 8	
Mean	37,333
Std. Dev.	4,802
n	18
%	24,3
Predicted	37,333

Node 9	
Mean	23,300
Std. Dev.	4,498
n	10
%	13,5
Predicted	23,300

Node 10	
Mean	35,000
Std. Dev.	8,042
n	7
%	9,5
Predicted	35,000