

Table S04

60% of CMS classified samples in FOCUS cohort was used to train the CMS classifier, 20% for validation, and 20% for test

		FOCUS									
		Model 1		Model 2		Model 3		Model 4		Model 5	
CMS classifier		Training									
	CMS	<i>n slides = 307</i>	<i>n patients = 166</i>	<i>n slides = 306</i>	<i>n patients = 167</i>	<i>n slides = 308</i>	<i>n patients = 166</i>	<i>n slides = 301</i>	<i>n patients = 165</i>	<i>n slides = 301</i>	<i>n patients = 165</i>
	CMS1	57	31	59	31	59	31	57	31	58	31
	CMS2	131	71	135	72	135	71	130	71	131	70
	CMS3	41	22	37	22	36	22	38	21	37	22
	CMS4	78	42	75	42	78	42	76	42	75	42
		Validation									
	CMS	<i>n slides = 96</i>	<i>n patients = 53</i>	<i>n slides = 98</i>	<i>n patients = 53</i>	<i>n slides = 99</i>	<i>n patients = 55</i>	<i>n slides = 104</i>	<i>n patients = 57</i>	<i>n slides = 104</i>	<i>n patients = 57</i>
	CMS1	20	10	18	10	20	11	22	11	22	11
	CMS2	42	23	41	22	41	23	44	24	42	25
	CMS3	9	6	12	7	14	7	12	8	12	7
	CMS4	25	14	27	14	24	14	26	14	28	14
		Test									
	CMS	<i>n slides = 103</i>	<i>n patients = 57</i>	<i>n slides = 106</i>	<i>n patients = 58</i>	<i>n slides = 99</i>	<i>n patients = 55</i>	<i>n slides = 102</i>	<i>n patients = 54</i>	<i>n slides = 100</i>	<i>n patients = 54</i>
	CMS1	21	11	21	11	19	10	19	10	18	10
	CMS2	45	24	46	26	42	24	46	24	43	22
CMS3	12	8	13	7	12	7	11	6	14	8	
CMS4	25	14	26	14	26	14	26	14	25	14	

100% of CMS classified samples in TCGA and GRAMPAIN were used to test the 5 models

		TCGA		GRAMPAIN	
		<i>n slides = 431</i>	<i>n patients = 430</i>	<i>n slides = 265</i>	<i>n patients = 144</i>
CMS classifier	CMS	73	73	39	20
	CMS1	189	189	115	63
	CMS2	59	58	63	35
	CMS3	110	110	48	26
	CMS4				

60% of CMS classified samples in FOCUS cohort was used to train the CMS classifier, 20% for validation, and 20% for test

CMS classifier	FOCUS										
	Model 1		Model 2		Model 3		Model 4		Model 5		
	Training										
	CMS	<i>n slides = 307</i>	<i>n patients = 166</i>	<i>n slides = 306</i>	<i>n patients = 167</i>	<i>n slides = 308</i>	<i>n patients = 166</i>	<i>n slides = 301</i>	<i>n patients = 165</i>	<i>n slides = 301</i>	<i>n patients = 165</i>
	CMS1	57	31	59	31	59	31	57	31	58	31
	CMS2	131	71	135	72	135	71	130	71	131	70
	CMS3	41	22	37	22	36	22	38	21	37	22
	CMS4	78	42	75	42	78	42	76	42	75	42
	Validation										
	CMS	<i>n slides = 96</i>	<i>n patients = 53</i>	<i>n slides = 98</i>	<i>n patients = 53</i>	<i>n slides = 99</i>	<i>n patients = 55</i>	<i>n slides = 104</i>	<i>n patients = 57</i>	<i>n slides = 104</i>	<i>n patients = 57</i>
CMS1	20	10	18	10	20	11	22	11	22	11	
CMS2	42	23	41	22	41	23	44	24	42	25	
CMS3	9	6	12	7	14	7	12	8	12	7	
CMS4	25	14	27	14	24	14	26	14	28	14	
Test											
CMS	<i>n slides = 103</i>	<i>n patients = 57</i>	<i>n slides = 106</i>	<i>n patients = 58</i>	<i>n slides = 99</i>	<i>n patients = 55</i>	<i>n slides = 102</i>	<i>n patients = 54</i>	<i>n slides = 100</i>	<i>n patients = 54</i>	
CMS1	21	11	21	11	19	10	19	10	18	10	
CMS2	45	24	46	26	42	24	46	24	43	22	
CMS3	12	8	13	7	12	7	11	6	14	8	
CMS4	25	14	26	14	26	14	26	14	25	14	

All CMS classified samples in the FOCUS cohort, 30% of TCGA cohort, and 20% of the GRAMPIAN cohort were used to train the domain classifier in each model

Domain classifier	FOCUS		TCGA		GRAMPIAN		
	CMS	<i>n slides = 510</i>	<i>n patients = 278</i>	<i>n slides = 126</i>	<i>n patients = 126</i>	<i>n slides = 57</i>	<i>n patients = 34</i>
	CMS1	98	52	23	23	8	4
	CMS2	222	120	53	53	27	16
	CMS3	62	36	17	17	13	8
	CMS4	128	70	33	33	9	6

100% of CMS classified samples in TCGA and GRAMPIAN were used to test the 5 models

CMS classifier	TCGA		GRAMPIAN		
	CMS	<i>n slides = 431</i>	<i>n patients = 430</i>	<i>n slides = 265</i>	<i>n patients = 144</i>
	CMS1	73	73	39	20
	CMS2	189	189	115	63
	CMS3	59	58	63	35
	CMS4	110	110	48	26