













205722630138/205722630138_R03C01	Nonprogressor	0.031421	0.386932	0	0.036051	0.068967	0.478055
205460720019/205460720019_R02C01	Nonprogressor	0.012701	0.215434	0.071348	0.06018	0.070054	0.586759
205722630150/205722630150_R01C01	Nonprogressor	0.155914	0.245633	0.014351	0.087404	0.0407	0.509526
205724780001/205724780001_R02C01	Nonprogressor	0.05914	0.217043	0.10548	0.020238	0.064128	0.535624
205724780057/205724780057_R01C01	Nonprogressor	0.017061	0.224373	0.008719	0.110285	0.022961	0.620039





## **ST4: Demographic and cell composition models**

### **Demographic and clinical data-based models**

	<b><u>Accuracy (mean±SEM)</u></b>	<b><u>C-statistic (AUC-ROC, mean±SEM)</u></b>
OABC		
All progressors vs nonprogressors	0.66±0.001	0.63±0.006
Radiographic-only vs. nonprogressors	0.69±0.003	0.60±0.007
Pain-only vs. nonprogressors	0.66±0.004	0.54±0.01
Dual vs. nonprogressors	0.62±0.005	0.68±0.007
JoCoOA		
Radiographic vs. nonprogressors	0.60±0.005	0.49±0.007
Initial OAI		
Radiographic vs. nonprogressors	0.51±0.007	0.49±0.009

### **Buffy coat cell composition data-based models**

OABC		
All progressors vs nonprogressors	0.66±0.001	0.48±0.004
Radiographic-only vs. nonprogressors	0.69±0.003	0.60±0.009
Pain-only vs. nonprogressors	0.66±0.001	0.51±0.01
Dual vs. nonprogressors	0.49±0.005	0.49±0.008
JoCoOA		
Radiographic vs. nonprogressors	0.60±0.0007	0.49±0.007
Initial OAI		
Radiographic vs. nonprogressors	0.50±0.002	0.49±0.005

*\* All data are presented as mean±SEM of 40 development cycles*





cg06831919	1	cg11826685	1	cg05171921	1
cg10304803	1	cg25483596	1	cg04939480	1
cg05255125	1	cg15260428	1	cg08453282	1
cg16362801	1	cg25181749	1	cg05457490	1
cg20788387	1	cg08486160	1	cg18500431	1
cg00385063	1	cg22980611	1	cg27143349	1
cg09736124	1	cg00867080	1	cg09272488	1
cg16568036	1	cg14274482	1	cg23740610	1
cg24708350	1	cg17721355	1	cg10231096	1
cg00440263	1	cg04044526	1	cg26430365	1
cg20328876	1	cg18540455	1	cg14055421	1
cg23611525	1	cg19543453	1	cg15334836	1
cg04080067	1	cg22322367	1	cg26291737	1
cg07895186	1			cg22232320	1
cg10404142	1			cg10200286	1
cg16040763	1			cg13495389	1
cg11301513	1			cg04975653	1
cg20972416	1			cg07261133	1
				cg17563229	1
				cg08680414	1
				cg23656161	1
				cg22415348	1
				cg23330385	1
				cg08155591	1
				cg13471365	1
				cg25447359	1
				cg25436826	1
				cg13859117	1
				cg11809123	1
				cg15272769	1
				cg08749419	1
				cg04043957	1
				cg06169760	1
				cg27402845	1
				cg05655935	1
				cg06803925	1
				cg18192146	1
				cg10534439	1
				cg03851398	1
				cg00333985	1
				cg09039436	1
				cg13576178	1
				cg17383793	1
				cg05235884	1
				cg05518842	1
				cg26754824	1
				cg16910350	1
				cg10290767	1
				cg04730588	1
				cg17161020	1
				cg04366619	1
				cg14359486	1
				cg05614741	1
				cg20464151	1
				cg22675207	1
				cg14053272	1
				cg14640386	1
				cg23697278	1
				cg11011888	1
				cg09523472	1
				cg01861389	1
				cg24828071	1
				cg18459239	1
				cg18260424	1
				cg03734677	1
				cg12415318	1
				cg16090786	1
				cg01571169	1
				cg15635472	1
				cg12640770	1
				cg08874598	1
				cg00510552	1
				cg06140118	1
				cg12469332	1
				cg24164798	1
				cg02287693	1
				cg09450550	1
				cg21642684	1
				cg17981091	1
				cg14699228	1
				cg01307007	1
				cg09239099	1

cg13356342	1
cg02444156	1
cg12053296	1
cg24864105	1
cg15449073	1
cg02024097	1
cg22186557	1

## ST6: Training model performance

### Full models

	<u>Any progressor</u>	<u>Pain-only progressor</u>	<u>Radiographic-only progressor</u>	<u>Dual progressor</u>
ROC	0.86±0.004	0.97±0.004	0.94±0.004	0.79±0.006
Accuracy	0.82±0.01	0.97±0.009	0.96±0.01	0.82±0.01

### Parsimonious models

	<u>Any progressor</u>	<u>Pain-only progressor</u>	<u>Radiographic-only progressor</u>	<u>Dual progressor</u>
ROC	0.89±0.003	0.95±0.005	0.94±0.003	0.85±0.005
Accuracy	0.83±0.002	0.94±0.004	0.92±0.002	0.78±0.004