

## A - Maximization

## B - Minimization

Decreasing parameter importance

Increasing parameter importance

$A_F(Sc. 1)$	1.8e+03	1.9e+03	2.1e+03	8.9e+02	4.4e+02	4.5e-07	1.5e-07	0.24	0.24	$A_F(Sc. 1)$	2.9e+03	18	5.6e+02	5.6e+02	4.1e+02	4.2e-07	3.9e-08	0.34	0.34
$A_F(Sc. 2)$	2.6e+03	1e+03	1.3e+03	7.1e+02	1.2e+02	8.2e-08	6.2e-08	0.71	0.71	$A_F(Sc. 2)$	2.9e+03	18	5.6e+02	5.6e+02	4.1e+02	4.2e-07	3.9e-08	0.34	0.34
* $A_M(Sc. 1)$	1.8e+03	3.5e+03	1.5e+03	96	2.5e+02	4.8e-07	7.7e-08	0.067	0.067	$A_M(Sc. 1)$	3.3e+03	30	6.6e+02	1.4e+02	2.7e+02	3.1e-07	3.7e-07	0.33	0.33
$A_M(Sc. 2)$	2.2e+03	1.6e+03	1.1e+03	8.2e+02	24	4e-07	1.8e-07	0.62	0.62	$A_M(Sc. 2)$	3.3e+03	30	6.6e+02	1.4e+02	2.7e+02	3.1e-07	3.7e-07	0.33	0.33
$A_{Ma}(Sc. 1)$	1.7e+03	1.5e+03	1.8e+03	1.5e+02	10	7.4e-08	1.5e-07	0.02	0.02	$A_{Ma}(Sc. 1)$	3.3e+03	30	6.6e+02	1.4e+02	2.7e+02	3.1e-07	3.7e-07	0.33	0.33
$A_{Ma}(Sc. 2)$	1.8e+03	1.2e+03	2e+03	29	2.7e+02	4.7e-07	2.1e-07	0.73	0.73	$A_{Ma}(Sc. 2)$	3.3e+03	30	6.6e+02	1.4e+02	2.7e+02	3.1e-07	3.7e-07	0.33	0.33
$A_{MC}(Sc. 1)$	2.1e+03	3.4e+03	1.9e+03	5e+02	3.8e+02	4.6e-07	1.4e-07	0.83	0.83	$A_{MC}(Sc. 1)$	1.4e+03	2.4e+03	5e+02	2.7e+02	4.4e+02	3.9e-07	3e-08	0.41	0.41
$A_{MC}(Sc. 2)$	1.5e+03	1.7e+03	2.4e+03	6.7e+02	2.3e+02	4.2e-07	4.4e-07	0.59	0.59	$A_{MC}(Sc. 2)$	1.4e+03	2.4e+03	5e+02	2.7e+02	4.4e+02	3.9e-07	3e-08	0.41	0.41
$A_{MII}(Sc. 1)$	1.8e+03	1.1e+03	2.7e+03	4.6e+02	3.4e+02	8e-09	3.7e-08	0.52	0.52	$A_{MII}(Sc. 1)$	1.1e+03	2.7e+03	1.8e+03	4.6e+02	3.4e+02	8e-09	3.7e-08	0.52	0.52
$A_{MII}(Sc. 2)$	1.8e+03	1.1e+03	2.7e+03	4.6e+02	3.4e+02	8e-09	3.7e-08	0.52	0.52	$A_{MII}(Sc. 2)$	1.1e+03	2.7e+03	1.8e+03	4.6e+02	3.4e+02	8e-09	3.7e-08	0.52	0.52
$T(Sc. 1)$	2.5e+03	1.7e+03	2.1e+03	5e+02	38	1.3e-07	3.9e-07	0.16	0.16	$T(Sc. 1)$	8.2e+02	2.3e+03	6.3e+02	1.3e+02	4.6e+02	7.2e-09	2.3e-07	0.21	0.21
$T(Sc. 2)$	2.5e+03	2.2e+03	5.3	2.1e+02	4.2e+02	3e-07	4.1e-07	0.6	0.6	$T(Sc. 2)$	8.2e+02	2.3e+03	6.3e+02	1.3e+02	4.6e+02	7.2e-09	2.3e-07	0.21	0.21
$C_I(Sc. 1)$	6.4e+02	1.7e+03	2.6e+03	4.8e+02	66	1.4e-07	4.7e-07	0.84	0.84	$C_I(Sc. 1)$	3.2e+03	8.6e+02	5.9e+02	6.8e+02	2e+02	4.8e-07	1.3e-07	0.003	0.003
$C_I(Sc. 2)$	2.1e+03	1.4e+03	2.6e+03	4.6e+02	1.6e+02	3.1e-07	1.9e-07	0.98	0.98	$C_I(Sc. 2)$	3.2e+03	8.6e+02	5.9e+02	6.8e+02	2e+02	4.8e-07	1.3e-07	0.003	0.003
*** $C_{III}(Sc. 1)$	1.2e+03	7.7e+02	2.3e+03	4.3e+02	3e+02	4.5e-07	4.5e-07	0.37	0.37	$C_{III}(Sc. 1)$	2e+03	2.1e+02	5.2e+02	1.8e+02	2.7e+02	2.8e-08	9.4e-08	0.071	0.071
** $C_{III}(Sc. 2)$	3.5e+03	5.6e+02	6.9e+02	3.2e+02	3.1e+02	2e-07	5.4e-08	0.15	0.15	$C_{III}(Sc. 2)$	2e+03	2.1e+02	5.2e+02	1.8e+02	2.7e+02	2.8e-08	9.4e-08	0.071	0.071
$I(Sc. 1)$	3.1e+03	3.2e+03	2.6e+03	5.5e+02	4.9e+02	1.2e-07	1.5e-07	0.62	0.62	$I(Sc. 1)$	1.4e+03	2.4e+03	5e+02	2.7e+02	4.4e+02	3.9e-07	3e-08	0.41	0.41
$I(Sc. 2)$	2.5e+03	1.7e+03	2.1e+03	1.6e+02	99	3.1e-07	3.7e-07	0.19	0.19	$I(Sc. 2)$	1.4e+03	2.4e+03	5e+02	2.7e+02	4.4e+02	3.9e-07	3e-08	0.41	0.41

Initial parameters (initial state of the burn wound after injury)

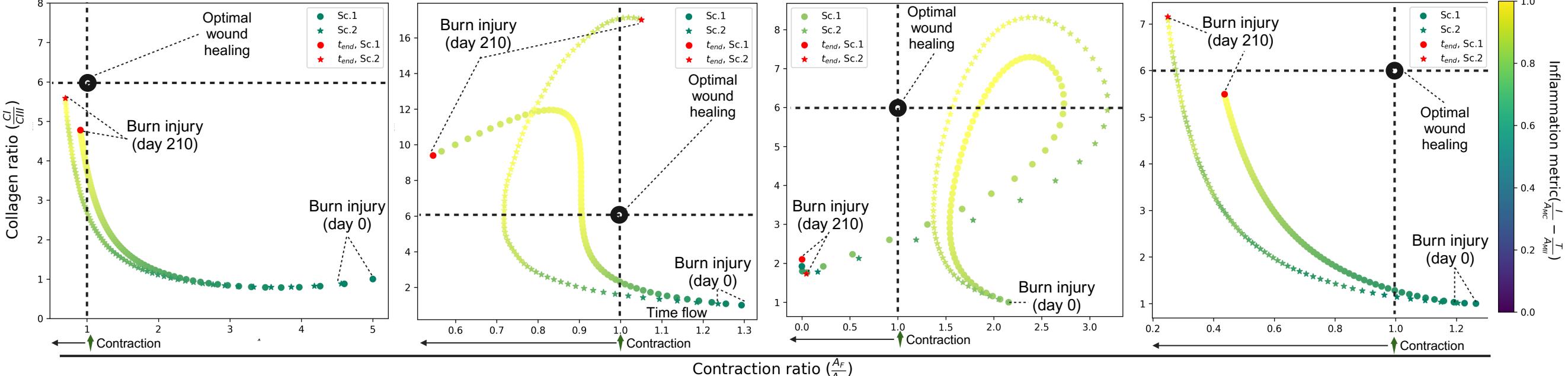
## C - Scar identification from evolution of ratio metrics over time

Initial parameters (N=2)

Max.  $A_M(*)$  (N=2)

Max.  $C_{III}(**)$  (N=2)

Min.  $C_I(***)$  (N=2)



## D - Wound identities clustered in data, according to ratio metrics

Inflammation metric

Increasing pro-inflammatory factors compared to anti-inflammatory



t-SNE Analysis - Scenario 1 (N=1000)

t-SNE Analysis - Scenario 2 (N=1000)

