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The model fitting

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/scratch/borgqvist/Dropbox/Work/Projects/symmetry\_based\_model\_selsection\_carcinogenesis/Code/fit\_to\_data.py:36: RuntimeWarning: overflow encountered in power

return A\*(t\*\*gamma)

/scratch/borgqvist/Dropbox/Work/Projects/symmetry\_based\_model\_selsection\_carcinogenesis/Code/fit\_to\_data.py:36: RuntimeWarning: overflow encountered in power

return A\*(t\*\*gamma)

/scratch/borgqvist/Dropbox/Work/Projects/symmetry\_based\_model\_selsection\_carcinogenesis/Code/fit\_to\_data.py:49: RuntimeWarning: overflow encountered in exp

return ((A)/(np.exp(np.exp(-alpha\*(t-tau)))-C))

/scratch/borgqvist/Dropbox/Work/Projects/symmetry\_based\_model\_selsection\_carcinogenesis/Code/fit\_to\_data.py:49: RuntimeWarning: overflow encountered in exp

return ((A)/(np.exp(np.exp(-alpha\*(t-tau)))-C))

/scratch/borgqvist/Dropbox/Work/Projects/symmetry\_based\_model\_selsection\_carcinogenesis/Code/fit\_to\_data.py:49: RuntimeWarning: overflow encountered in exp

return ((A)/(np.exp(np.exp(-alpha\*(t-tau)))-C))

/scratch/borgqvist/Dropbox/Work/Projects/symmetry\_based\_model\_selsection\_carcinogenesis/Code/symmetry\_toolbox.py:180: RuntimeWarning: overflow encountered in exp

return ((A)/(np.exp(np.exp(-alpha\*(t-tau)))-C))

Fitting is done!

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The transformation scales increasing the age from 85 years to 170 years

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The PLM: epsilon\_PLM = 1.386294361120

The IM myeloma: epsilon\_IM\_myeloma = 0.767368329872

The IM colon: epsilon\_IM\_colon = 0.650429833712

The IM CML: epsilon\_IM\_CML = 0.554786599426

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The symmetry based framework for model selection

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The scales for the framework are the following:

PLM All datasets: epsilon\_scale = 1.386294361120

IM myeloma: epsilon\_scale = 0.767368329872

IM colon: epsilon\_scale = 0.650429833712

IM CML: epsilon\_scale = 0.554786599426

The output:

Myeloma:

Colon cancer:

CML:

Symmetry framework is done!

Illustrate framework!

PLM

PLM epsilon scale: 0.690

IM

IM epsilon scale: 0.650

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Action of symmetries!

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Epsilon scales for illustrations (i.e. the value that the transformations are pushed with twice)

PLM, 0.3465736

IM, 0.3836842

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Calculations are done!

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