Title of paper: Comparison of joint modeling and landmarking for dynamic prediction under an illness-death model
Authors: Krithika Suresh, Jeremy M.G. Taylor, Alexander Tsodikov

Contact information for corresponding author: Email ksuresh@umich.edu

Simulation Study:
The R files for the simulation study are named according to the simulation setting:
i) "Markov": Markov model with single baseline covariate
ii) "SemiMarkov": Semi-Markov model with single baseline covariate, and
iii) "X1X2": Markov model with two baseline covariates
and the type of data structure ("Super": super data set; "Long": longitudinal data set) and marker measurement ("CO": continuously observed; "IT": inpsection times)

The R files titled "BiasVar" are used to compute the prediction probabilities for determining the bias and variance, and "BS" is used to denote those for determining AUC and Brier Score.

The R files containing "PredictionFunctions" contain functions which are sourced by the other files.

The "Results" folder is empty, but will be populated once any of the R files are run within the current directory and is referenced in the files used to create the Figures.

Note: The code associated with some of the models in these files takes a long time to run. Comment out the code for the models that you are not interested in producing the results for before running the code in these R files.

Figures:
The R files begining with the title "Figure" give the code for producing the figures in the paper and also describe the files that must be run prior to running the code in these files.

Real Data analysis:
The PAQUID data can be loaded from the "SmoothHazard" package in R using data(Paq1000). The R files associated with the analysis of this data begin with the title "Paq".

The Prostate cancer data is not provided, but the code is provided to demonstrate the models that were fit. The R file associated with the analysis of this data is titled "PCdata" and is used to produce Figure 10.

The code for producing the figures associated with these real data analyses are provided in their respective files.

```
>sessionInfo()
R version 3.3.1 (2016-06-21)
Platform: x86_64-w64-mingw32/x64 (64-bit)
Running under: Windows >= 8 x64 (build 9200)

locale:
[1] LC_COLLATE=English_Canada.1252  LC_CTYPE=English_Canada.1252
LC_MONETARY=English_Canada.1252
[4] LC_NUMERIC=C                    LC_TIME=English_Canada.1252

attached base packages:
[1] stats     graphics  grDevices utils     datasets  methods   base

other attached packages:
[1] reshape2_1.4.1     mstate_0.2.9       pec_2.4.9          timeROC_0.3        prodlim_1.5.7      lava_1.4.4
[7] dynpred_0.1.2      survival_2.39-5    SmoothHazard_1.2.3
```

loaded via a namespace (and not attached):
 [1] Rcpp_0.12.7 mvtnorm_1.0-5 lattice_0.20-34 codetools_0.2-14 foreach_1.4.3 timereg_1.8.9
 [7] plyr_1.8.4 grid_3.3.1 magrittr_1.5 stringi_1.1.1 Matrix_1.2-7.1 splines_3.3.1
[13] RColorBrewer_1.1-2 iterators_1.0.8 tools_3.3.1 stringr_1.1.0 numDeriv_2016.8-1