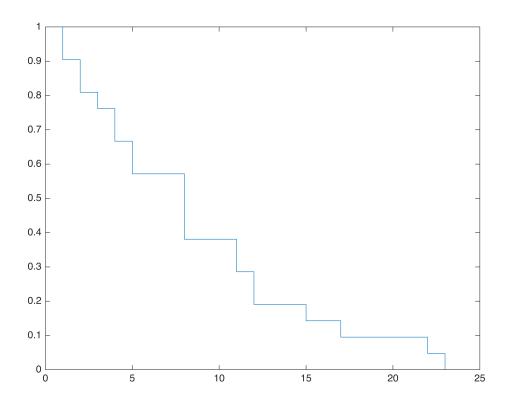
## Kaplan-Meier plot

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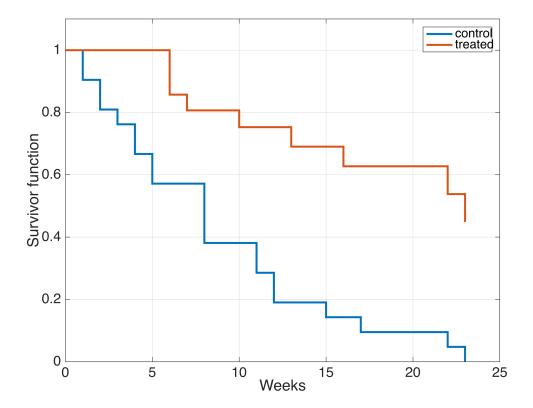
Demonstrates the use of stairs to produce a Kaplan-Meier survival plot, as well as some other methods to improve the appearance of a figure.

Data has been input manually from the file gehan.txt available in the data/Cox folder. The file gehan.txt was adapted from that used by German Rodriguez of Princeton University: https://grodri.github.io/survival/gehan

```
% Manually entered data from gehan.txt file.
% In future, will look at reading into a Table and processing.
treated weeks =
                   [6 6 6 6 7 9 10 10 11 13 16 17 19 20 22 23 25 32 32 34
35];
treated_censoring = [0 0 0 1 0 1 0 1 1 0 0 1 1 1 0
1];
control weeks =
                   [1 1 2 2 3 4 4 5 5 8 8 8 8 11 11 12 12 15 17 22 23 ] ;
control censoring = [0 0 0 0 0 0 0 0 0 0 0 0 0
                                              0
                                                  0
                                                     0
                                                        0 0
% ecdf is MATLAB's Empirical Cumulative Distribution Function
[fc, xc] = ecdf(control_weeks, 'Function', 'survivor', 'Censoring',
control censoring);
[ft, xt] = ecdf(treated_weeks, 'Function', 'survivor', 'Censoring',
treated_censoring);
stairs(xc, fc) % control plotted using stairs function
hold on
```



```
% For the treated, here we add a 'fake' point at the beginning.
% This corresponds to a survivor function of 1 at week 0.
ft = [1; ft]; % first survivor function point is now 1
xt = [0; xt]; % first time point is now 0
stairs(xt,ft)
hold off, grid on
legend('control','treated')
xlabel('Weeks')
ylabel('Survivor function')
ylim([0 1.1]) % adjust the y-axis limits for clarity
set(gca, 'FontSize', 14)
% To control the LineWidth, you can find the Stair objects and then set
both the
% LineWidths using set
% (You cannot just do hstairs.LineWidth = 2 because there is more than one
% stair plot and hstairs is an array. However, set will work.
hstairs = findobj('Type','Stair');
set(hstairs, 'LineWidth',2)
```



David Atkinson, December 2023