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About This Document

- This document accompanies the Medical Screening Tests App.
- This document is hosted at GitHub.
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#####
#                               ScreeningTest
#####
#
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#
# ScreeningTest: PROGRAM PURPOSE.
#
# Medical screening tests vaunting very high "general accuracy" can give
# staggering levels of false results when the prevalence of a disease is low.
# This program explores the effect the prevalence of an infection in a
# population on the usefulness of screening tests. The goal is to
# demonstrate that screening tests are complex and less reliable
# than commonly supposed.
#
# Inputs:
#   A GUI invites the user to enter the following medical test statistics.
#   Population:
#   Test Sensitivity:
#   Test Specificity:
#   Start of Prevalence Range.
#   End of Prevalence Range:
#   Prevalence of Interest:
#   CheckBoxes allowing the plotting of different statistics.
#
# Outputs:
#   (1) A plot with:
#       x axis. A range of disease prevalences.
#       y axis:
#           Positive Predictive Value.
#           Negative Predictive Value.
#           False Positives (NPV)
#           False Negatives (NPV)
#           General Accuracy (A somewhat misleading item !)
#           Prevalence of Interest (Vertical line).
#   (2) A Matplotlib menu permitting saving the plot, zooming etc.
#   (3) A CSV file with the plot data.(Optional)
#   (4) A print of the plot data. (Optional)
#
#####
```

