

The following instructions are for the Nuclear Physics Laboratory. We will use matRad, an open source treatment planning system for radiation therapy written in Matlab.

Here, the instructions for a standalone installation are reported (source: <https://github.com/e0404/matRad/wiki/Setting-up-matRad#2-standalone-installation>)

Standalone installation:

If you do not have MATLAB installed on your PC you are restricted to use matRad's standalone application. For this option a MATLAB installation is not required. The installer is available for Windows, Mac and Linux with the latest matRad release.

Steps for installation:

1. Download the matRad installer of the latest Release to your system (Win64, Mac64, Linux64)
2. Run the respective installer for your system
 - Windows: Run the downloaded executable installer
 - Linux: Run the executable install script. Make sure that the *.install file has executable permissions.
 - Mac: Here we provide a dmg containing the installer (Since the installer is not apple-certified, you might explicitly launch it from the terminal or by right-click and then open).

After that, you should be guided through the installation process. Note that the installers will want to download the "Matlab Runtime" from Mathworks in the process. The runtime is quite large (~2GB) and is required to run compiled deployed applications written in Matlab.

3. Run matRad:

- Windows: Just like with every other program, you should have a desktop icon.
- Mac: Per default matRad will be installed to /Applications/matRad. To run matRad navigate to /Applications/matRad/applications and double click or right click -> open on the matRad.app application. The first startup might take a few seconds.

Note: an installation warning appears that matRad is from an unverified developer. You can solve this issue by opening the installer from the context menu (depending on the configuration either Ctrl + click or right-click on the icon, and then click "Open" in the menu). You will then get the option to open the application in spite of the missing verification and thus to install matRad.

- Linux & Mac: To start matRad, you can alternatively use the provided run_matRad.sh script from the terminal. It requires one argument which gives the path to the installed Matlab-Runtime. Refer to the readme_linux.txt and readme_mac.txt in your installation directory for more information.

3. Patient/Phantom files

The patient files should be included with the installer and will be installed into the desired location. For windows, for example, they can be found within the "application" folder of the chosen installation directory. Moreover, we also provide extra links to the open source patient files stored in matRad's native *.mat format for a [head and neck case](#), a [liver case](#), a [prostate case](#), a [box phantom](#), and AAPM's [TG119 phantom](#). Otherwise you need to start with a [DICOM import of your own patient data](#).