doseStats quick install and run guide

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Current script version

The below guide is valid and accurate for script versions:
doseStats_v0.5_beta

1. Download the latest version of the *doseStats* from GitHub
2. Place the file tree in a location of your choosing
3. Watch the demo video ('demo_trim') located in the documentation folder
4. Open visual studio
5. Open the solution file for *doseStats* (located at: //path/to/doseStats/Projects/doseStats/doseStats.sln)
6. Once the solution is open, right click on the project file and select properties
7. Change the name of the build (what the dll will be called) to a name of your preference (I recommend leaving it as doseStats_vXX.esapi.dll where XX is the current version number on GitHub)
8. Select Build–>Rebuild Solution
    - This will ensure the build does not try to use any cached data from the previous build on my institution's system
    - If the code is having trouble finding the VMS.TPS dll files. You can re-add them to the code by deleting the existing references to these dll files, right clicking on references– add. Browse to the doseStats directory and there should be a folder there called 'VMS_TPS_resources' with the dll files for both v16.1 and v15.6 of ESAPI.
9. Assuming no issues, the compiled dll should now be located in //path/to/doseStats/plugins

10. Inside this directory, there should also be a folder called 'configuration' and inside that folder there should be a file called HDR_doseStats_config.ini

    - This HDR_doseStats_config.ini file should be a copy of the HDR_doseStats_config.ini file in the main doseStats directory

11. Modify the .ini file inside the configuration folder:

    - Change the documentation path location to //path/to/doseStats/documentation
    - Modify the patient database location to the appropriate location for your clinic
    - Modify the excel template name for writing the EQD2 information (not provided with the code)
    - Add/modify the second check template name for writing the second dose calculation results to a spreadsheet (not provided with the code)
    - NOTE: IT IS IMPORTANT THAT THERE ARE NO EMPTY LINES OR SPACES BEFORE/AFTER THE '=' CHARACTER (see Section 5 of the doseStats_guide.pdf for more details)

12. The scripts can be tested in either a research Eclipse box (i.e., test box) or the clinical system

13. Since the scripts only read data from Eclipse, no script approval is needed to run *doseStats*

14. Open a previously treated T&O plan from your institution

15. Copy the plan to a new course and change the plan ID to 'HDR1' (case sensitive)

16. Save and recalculate the dose

17. Add a reference point to the plan and set the ID to 'QA' (place it somewhere on the 100% isodose line)

18. Set this point as the primary reference point

19. Verify the primary reference point in the plan has dose tracking limits that reflect the treated plan (e.g., total dose = 2800 cGy, session dose = daily dose = 700 cGy) (Figure **??**)

20. Go to tools –> scripts

21. Change the default location from 'System Scripts' to 'Folder' and navigate to the plugins directory at //path/to/doseStats/plugins

22. Hit ok, then the compiled dll should show up

23. Run the script and ensure the GUI appears with no warnings. If so, everything initialized correctly!

24. Try adding a new constraint to the DVH metrics list (e.g., bladder, volume at dose (%), 100, %) and hit calculate statistics (or Ctrl + E)

25. Verify the new requested metric shows up in the window under the bladder DVH metrics

26. Hit clear list and hit Add default DVH statistics and then Calculate Statistics

27. Hit the Help button and ensure the doseStats_guide.pdf document opens

28. Close the PDF and hit Run dose calculation

29. Verify the window pops up and the calculation performs correctly

30. If everything has worked so far, close the script. Now, treatment approve HDR1 and make a copy of the plan and call it HDR2

31. Bring HDR2 into the window and make some adjustments to the dose, recalculate and save

32. Relaunch the script. The retrieved metrics in the window should have been updated to their current values and the achieved metrics for HDR2 should be propagated forward for the remaining fractions

33. If everything has worked so far, congrats! The script is working perfectly

34. The last step is to configure the script to correctly write the retrived metrics to an excel file for both the EQD2 data and the second dose calculation data (template spreadsheets are NOT provided with the code)

35. For more info on how to do this, reference the doseStats_guide.pdf document