



ProKnow Resources

# Frequently Asked Questions

## Browser Support

**Q:** ProKnow says my internet browser isn't supported, or my internet browser won't allow me to download the dataset. What do I do?

**A:** ProKnow officially supports the latest versions of Chrome, Firefox, Safari, Microsoft Edge, and Internet Explorer 11. If you are using one of these browsers and see something behaving strangely, please report it to our technical support team so we can resolve your issue. If, however, you are using an older or unsupported browser (Internet Explorer 6-10, Opera, etc.), we suggest you install Chrome or Firefox (both free downloads) to access the site.

The decision to only support modern browsers stemmed from the fact that we wanted to create a rich, interactive experience that the majority of users could enjoy. The only way to achieve the interactivity and responsiveness we believe our users deserve is to leverage the latest in web technologies (canvas, SVG animations, CSS3, flexbox, web sockets, etc.) and, unfortunately, older browsers simply do not have these capabilities. Furthermore, supporting older browsers is terribly time consuming and frankly, we'd rather spend our time developing new, innovative capabilities (that all of our users can enjoy) than fixing obscure rendering bugs (that only a fraction of users will notice).

# Datasets

**Q:** How do I download the study datasets to my treatment planning system if the machine that it is installed on is an older machine and I'm unable to install a newer browser, or the machine doesn't have internet access.

**A:** We suggest that you use another machine within your network to download and extract the dataset onto a thumbdrive and then move the files to your treatment planning machine, rather than downloading them directly.

If you are unable to install a modern browser on any machine within your network, you can always download the dataset from a computer off your network (e.g., at home) and then transfer them to your treatment planning machine via thumbdrive. Keep in mind that your IT department may explicitly prohibit transferring files from external sources without their express permission or knowledge, so make sure you are properly following all internal procedures when transferring files to and from your network.

## “Editing” Contours

**Q:** Can I edit contours when I optimize my plan?

**A:** Sure, if it is part of your technique then feel free to add or edit contours if that is part of your normal plan optimization technique. Your new contours will not be uploaded to ProKnow, only your plan and dose. Only the original structures will be used in the scoring (i.e. to calculate DVH data, etc.).

## “External” Contours

**Q:** Is there an “external” (or skin) contour already provided?

**A:** Depending on the structure set, there may or may not be a patient external contour created in the provided DICOM RT Structure Set. If your TPS requires a patient external contour/skin, and you do not see one in the structure set you downloaded and imported, then you will need to add your own. NOTE: Some structure sets may contain a “skin” contour that is actually a thin rind (e.g. 5 mm thick) and those will not work as your patient external contour because they will be hollow.

# Plan and Dose Requirements

**Q:** Besides trying to achieve the the plan quality metrics, are there any other requirements for the plan and dose I create?

**A:** We do have several minimum requirements for the plan and dose you will create and upload.

[1] We require that dose grid resolution meet a minimal requirement of 3 mm spacing or lower in all dimensions (e.g. 4 mm grids are far too coarse to give accurate DVH curves). In some cases (e.g. very small target or OAR volumes) we might require 2 mm or less, but we will put that into the plan-specific instructions.

[2] Set the size of the dose grid extents (i.e. the bounding box inside of which you will calculate dose) to cover all of the critical anatomy, but it need not cover all of the CT images. This will cut down on the size of the RT Dose file and speed up the uploading and calculation of your score.

[3] Use your judgment and do not create any impractical treatment plan designs. VMAT plans should use three arcs or less, IMRT should use 9 unique beam geometries or less, and Tomotherapy plans should not exceed a conventional delivery time (i.e. no unrealistic pitch settings). Cyberknife delivery will take longer so if you are a CyberKnife user, do not exceed normal tolerances.

## Downloaded Files

**Q:** What is this file that I just downloaded and what do I do with it?

**A:** The initial ProKnow download for a \*Plan Study\* will be a zip containing all the CT images and RT Structure Set in DICOM format. (Note: The downloaded file should end with \*.zip so if your browser removes that file extension, you will need to add it back.) Once downloaded, unzip the data to render the source DICOM files that you will need to import into your TPS. If you need TPS-specific instructions, check out our resource library here: <http://blog.proknowsystems.com/resources/tps>

# Estimated Creation Times

**Q:** Why are you asking for my estimated time-to-create the plan? And how will this be used?

**A:** Planning efficiency is an important thing to study. Now, your answer here is for research only and will not be part of your plan quality score. We need these entries to be as accurate as possible to be useful. For example, if you really did get your plan done in 1.5 hours, then let us know that, but if it took you 20 hours, that is important as well. We are trying to learn different planning efficiencies in order to derive best practices to share, and that is why this is important.

## TPS Instructions

**Q:** Do you have TPS-specific instructions on data import or export of DICOM files? Such as: Eclipse, Pinnacle, RayStation, Monaco, XiO, CyberKnife, Tomotherapy, ViewRay, etc.?

**A:** We have a library of technical resources here:

<http://blog.proknowsystems.com/resources>

If you see any that are missing and would like to help us add one, let us know by contacting us at:

[support@proknowsystems.com](mailto:support@proknowsystems.com)

## Study Analytics

**Q:** When will the interactive analytics and population statistics be posted on the ProKnow site?

**A:** Study results for “public” plan studies, including statistical analysis of all metrics and plan composite scores, will be posted for all participants as soon as the study is closed \*and\* the results presentation has been given or publication has been submitted. You will be notified when population results are posted for you to study. Once posted, each participant will be able to return to their ProKnow portal at any time to interactively study their individual results vs. the population.

# Plan Participation

**Q:** Who should participate in each plan study? Should I? What if I am inexperienced? What if I already have mastered the art?

**A:** Everybody is encouraged to participate in every study! Even if you are inexperienced, or an expert, at the particular plan study topic or body site, your participation adds knowledge for our community. As always, all results are fully secure and anonymous, with the exception of “high performers” who opt to be recognized by name and volunteer to be interviewed about their planning methods.

# Plan Study Purpose

**Q:** What is the purpose of the ProKnow Plan Study Program? Why is this important?

**A:** The goals of our program are to: 1) quantify the relative capabilities of different planners, planning systems, and delivery modalities to create a highly conformal dose to radiation therapy target, 2) study the variability across all submitted plans, and 3) determine, then communicate, “best practices” to share with the community. Ultimately the goal is to increase the level of quality of radiation treatment planning (and delivery) worldwide, and to reduce the variation from site-to-site or planner-to-planner.