

Defining Instruments / Calibrating Images

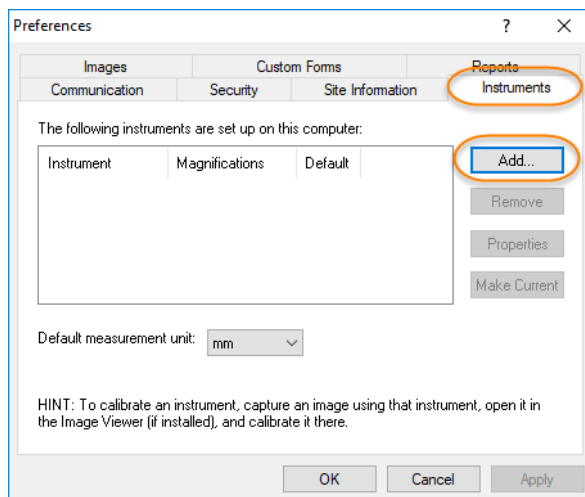
Technical Summary

Medical scopes, instruments and the various cameras used to document exams can be defined inside of the **Second Opinion™** Professional software. Once defined and if applicable, calibrated, these devices are available to be associated with images and video clips as they are saved. When using an instrument with fixed magnifications, the instrument and the magnification setting used when taking the picture, can be associated with the image upon saving. Once saved, the calibration settings for the device and specified magnification, is saved with the image. When the image is opened in the image viewer, the measuring line and polygon tools will be enabled.

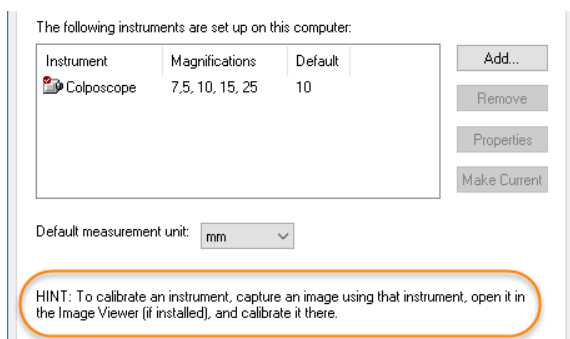
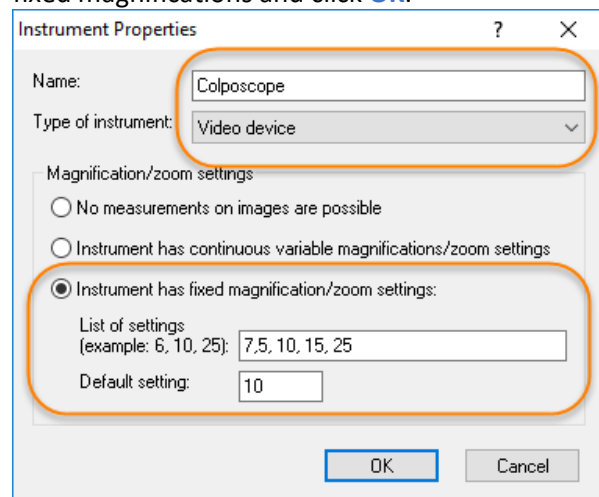
Instruments with Fixed Magnification Settings

Run **Second Opinion™** Professional and open up the Sample Patient folder. Next click the **System** menu choice, then **Preferences**, lastly click the **Instruments** tab. Now click the **Add** button located within the **Preferences** dialog box.

Define / Edit Instruments



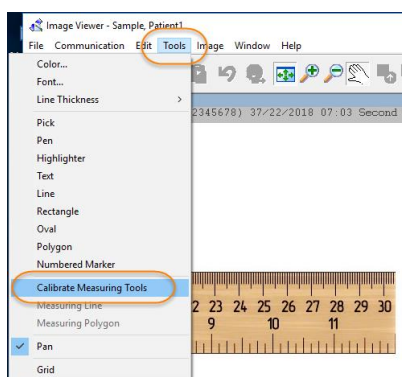
Type in the appropriate values for the scope with fixed magnifications and click **OK**.



Calibrating Instruments

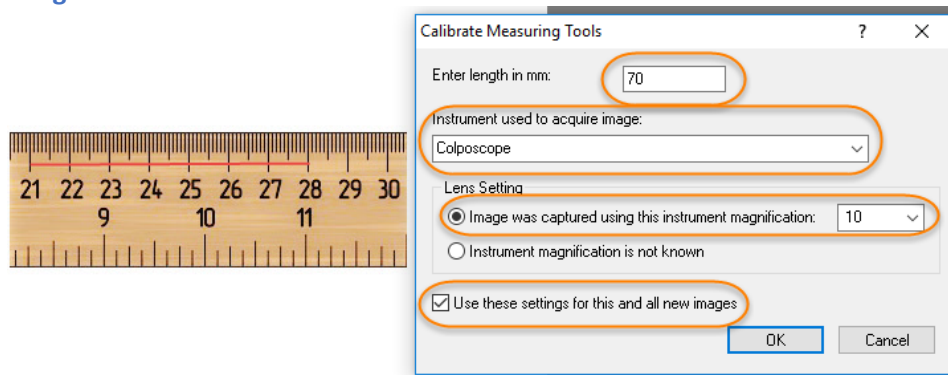
The next step is to open an image which contains something of known distance, like a picture of a ruler, that was taken with the fixed magnification instrument using the desired magnification. Once the image is open, click the **Tools** menu then click **Calibrate Measuring Tools**.

Note: The best way to get an image of this type is to simply take a picture of a ruler noting the magnification level of the instrument when capturing the picture.



The mouse pointer changes to a set of calipers.

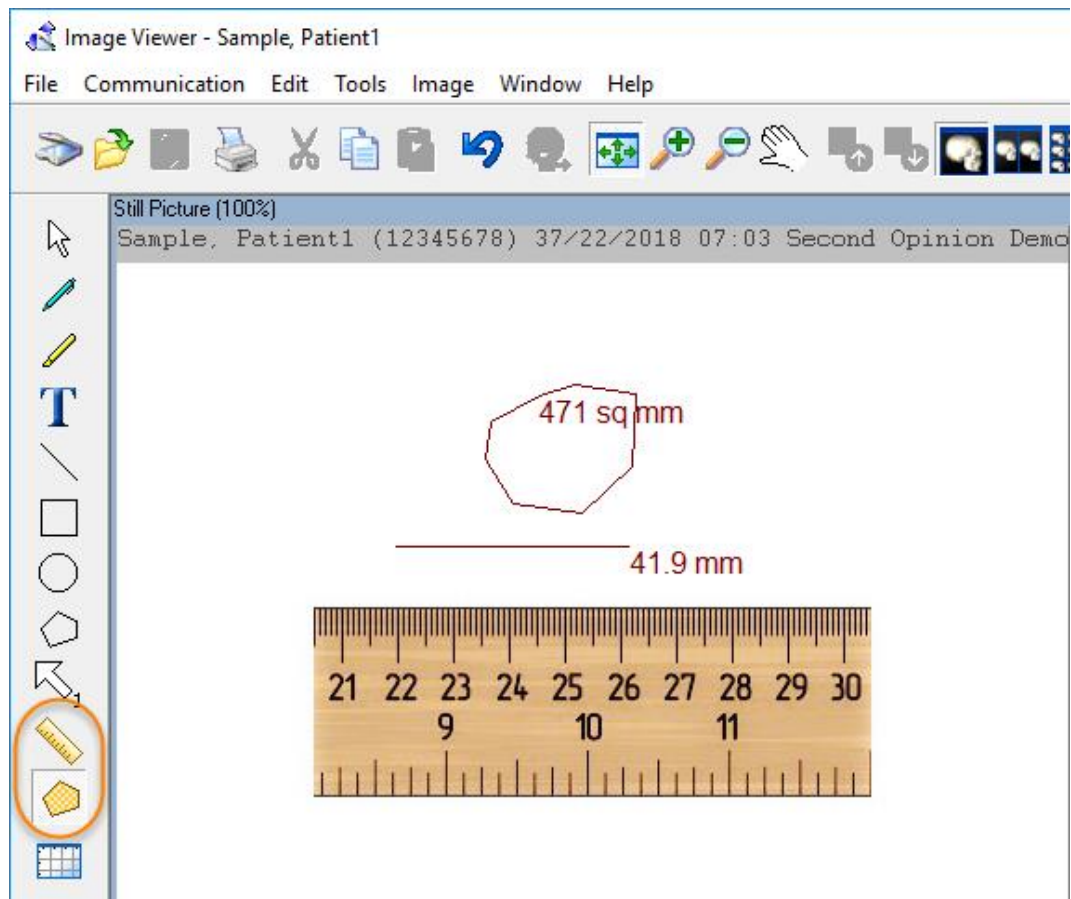
Now position the caliper tool on the ruler and by clicking and holding down the left mouse button down, draw a line down any known distance on the image and then type that distance in the dialog box. Now choose the appropriate **Instrument**, click **Image was captured using an instrument with magnification** and choose the appropriate magnification value. Lastly click **Use these settings for this and all new images**.



Note: the longer the line the more accurate the calibration.

Note: If the magnification values are precise, there is no need to calibrate each different scope magnification level; once a magnification level is calibrated each additional magnification level is calculated by the program. If the magnification values are estimate or fixed numbers, repeat the calibration procedure for each magnification choice.

Once an image is calibrated both the **Measuring Line** and **Polygon** tools are enabled.



Measuring Line Tool

To measure a distance on an image, click the **Measuring Line** tool. Position the mouse cursor to the desired start location. Click and hold the left mouse button and drag it to the desired end point. A line will appear with the associated distance.

Measuring Polygon Tool

To measure an area on an image, click the **Measuring Polygon** tool. Position the mouse cursor to the desired start location, click and hold the left mouse button and drag it to start the tool (short distance). Once the tool is started, click around the area to be measured back to the starting point. Once the polygon is complete, a polygon will appear with the associated distance.

Note: Once the Polygon tool is started, double clicking the left mouse button, will automatically close the polygon.

Saving Images with Instrument Values

By filling in the **Source/Instruments** and/or **Magnification/Calibration** values in the **Document Information** save dialog box, any associated calibration settings will be automatically saved with the image. When opening this image in the Image Viewer, it will be automatically calibrated.

Document Information

Image Id: 2C06231AA40 Session: 20180322

Description: Image

Source/Instrument: Colposcope Magnification/Calibration: 10

Open in Viewer

Notes:

Keywords:

Apply this information to:

- Only this image/clip
- All already captured images/clips only
- All captured and future images/clips during this session

OK Cancel

Instruments with Variable Zoom Magnification Settings

Medical scopes, instruments and digital cameras that do not have fixed magnifications can also be defined in the **Instruments** tab within the software. If you want to use the measuring tools, there has to be something of known distance viewable in the same plane that the measurements will occur. A ruler or some other legend can be placed next to the area to be measured. Once the image has been saved and opened in the Image Viewer, the image can be calibrated by following the calibration procedures above.

Note: Each image can be independently calibrated.

Instrument Properties ? X

Name:

Type of instrument:

Magnification/zoom settings

No measurements on images are possible

Instrument has continuous variable magnifications/zoom settings

Instrument has fixed magnification/zoom settings:

List of settings (example: 6, 10, 25):

Default setting:

OK Cancel

For More Information or Technical Support Give Us a Call

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