

Taking Better Confocal Images

Kim Peifley

2/09/15

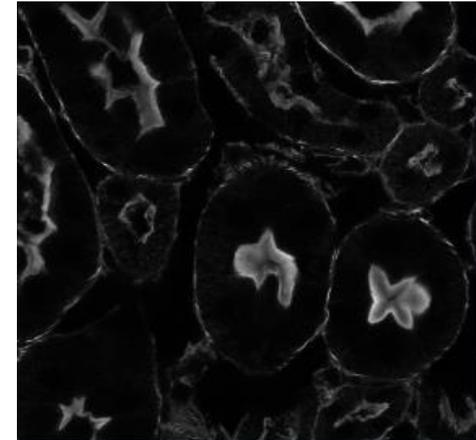
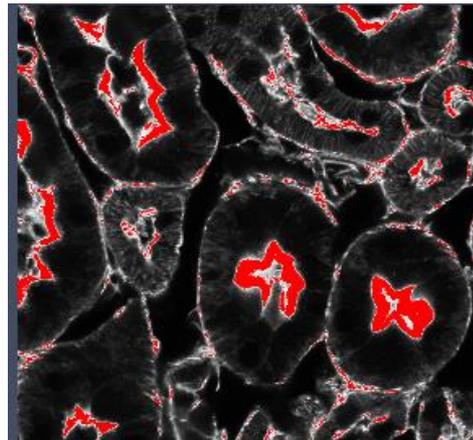
There are a number of ways to make an image better. It can be done the acquisition as well as post acquisition phases. Sometimes just small adjustments in laser power, gain or contrast settings can make a difference.

LSM710 AND LSM780

Image Too Bright

An image that is bright may seem to look good but it actually hides a lot of details.

When you are scanning your sample make sure to check **Range Indicator** in the **Dimensions Tab** so you can see the image in black and white. The image on the left shows red areas which indicate saturation. Adjust laser power and gain settings to remove the red.



Alexa 568 settings: The 561 laser power was reduced from 2.5% to 1.0% and the gain was reduced from 614 to 504.

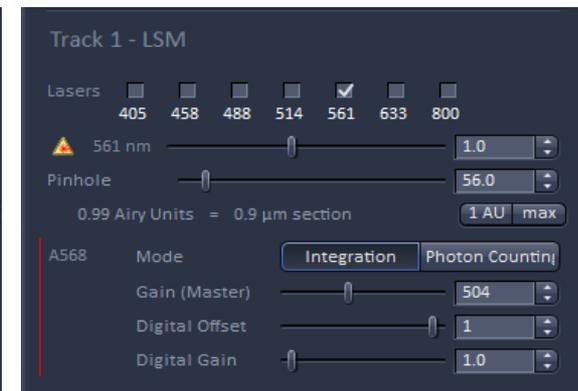
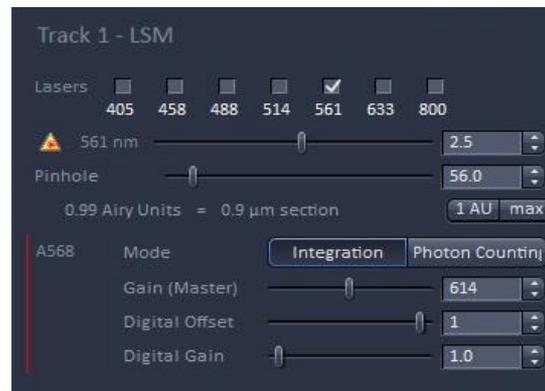
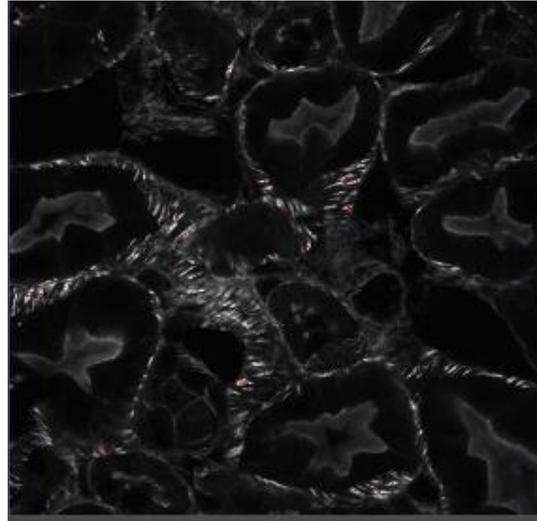
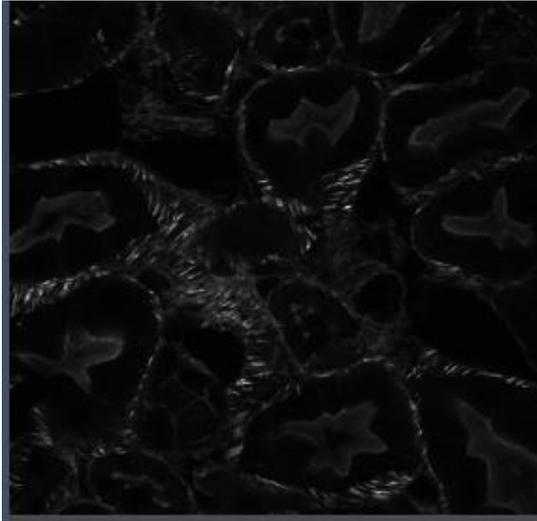
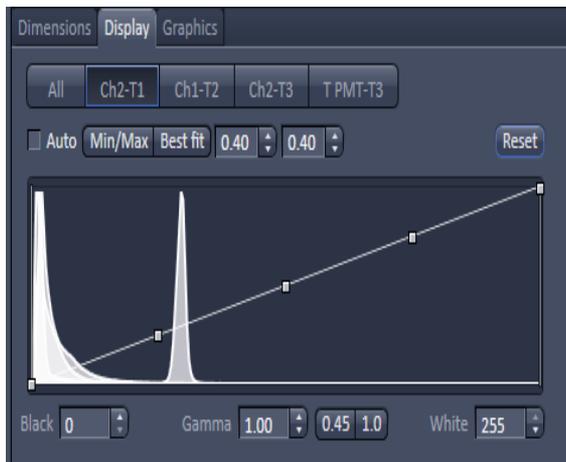


Image Too Dim

An image that is too dim can be made brighter using contrast enhancement



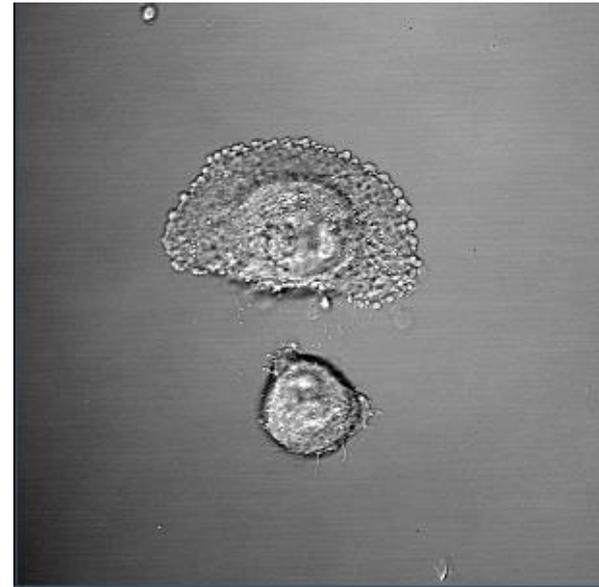
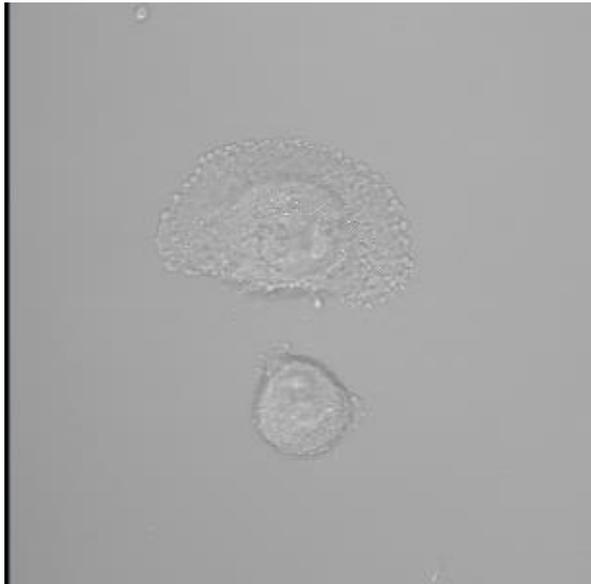
The image on the left is the original Alexa 568 image. The image on the right is after contrast enhancement. The contrast settings are seen below.



Remember: You can always make an image brighter but you cannot make it dimmer.

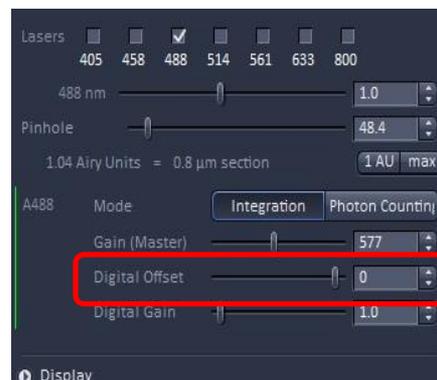
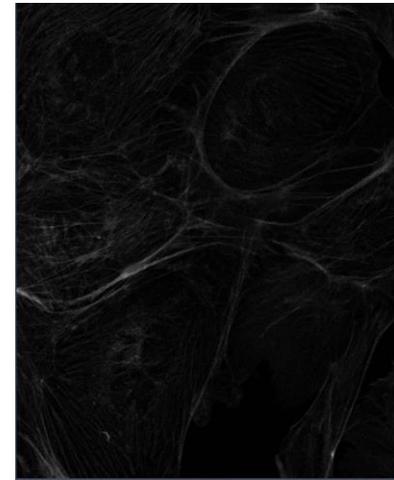
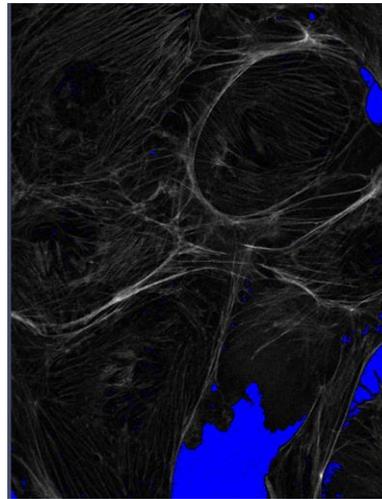
Improving DIC Images

DIC Images can also be improved by using contrast enhancement



Using Digital Offset

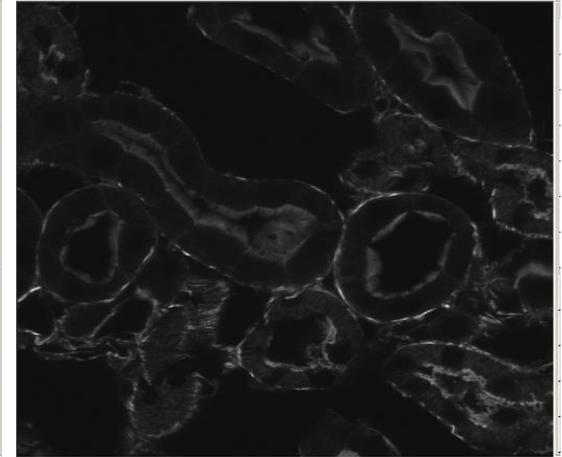
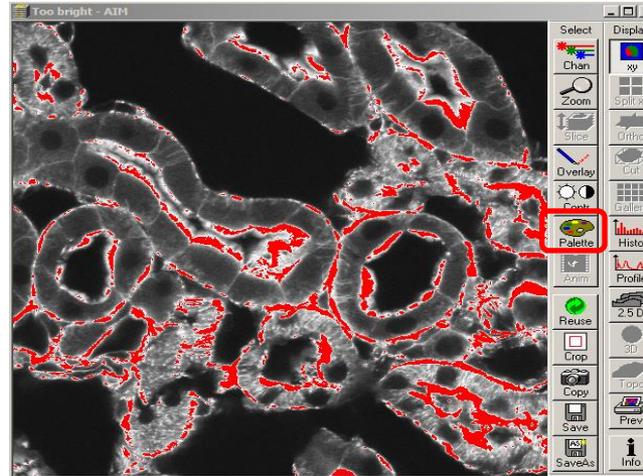
When **Range Indicator** is checked you will see the image in black and white. If you see blue that indicates fluorescence is below detection level. You can eliminate the blue by using the **Digital Offset**. You can see in this example that the offset only had to be changed from 0 to 1 to remove the blue.



LSM510

Image Too Bright

When you are scanning your sample make sure to click **Palette** on the to open the **Color Palette** window. In the Color Palette window select **Range Indicator** so you can see the image in black and white. The image on the left shows red areas which indicate saturation. Adjust laser power and gain settings to remove the red.



Alexa 568 settings: The laser power was reduced from 42.6% to 23.8 % and the gain was reduced from 628 to 477.

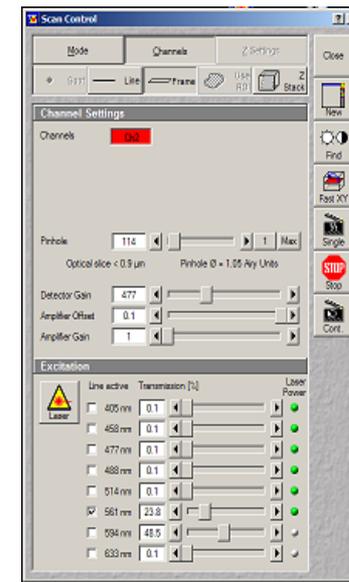
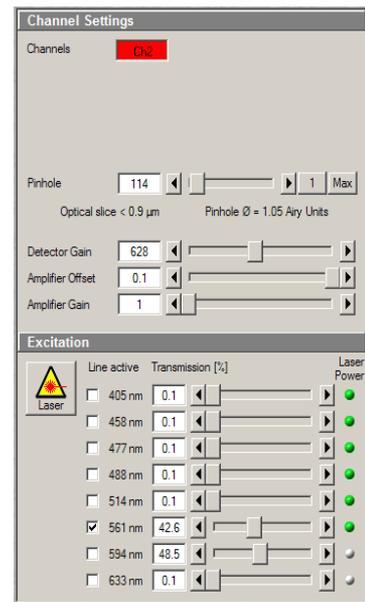
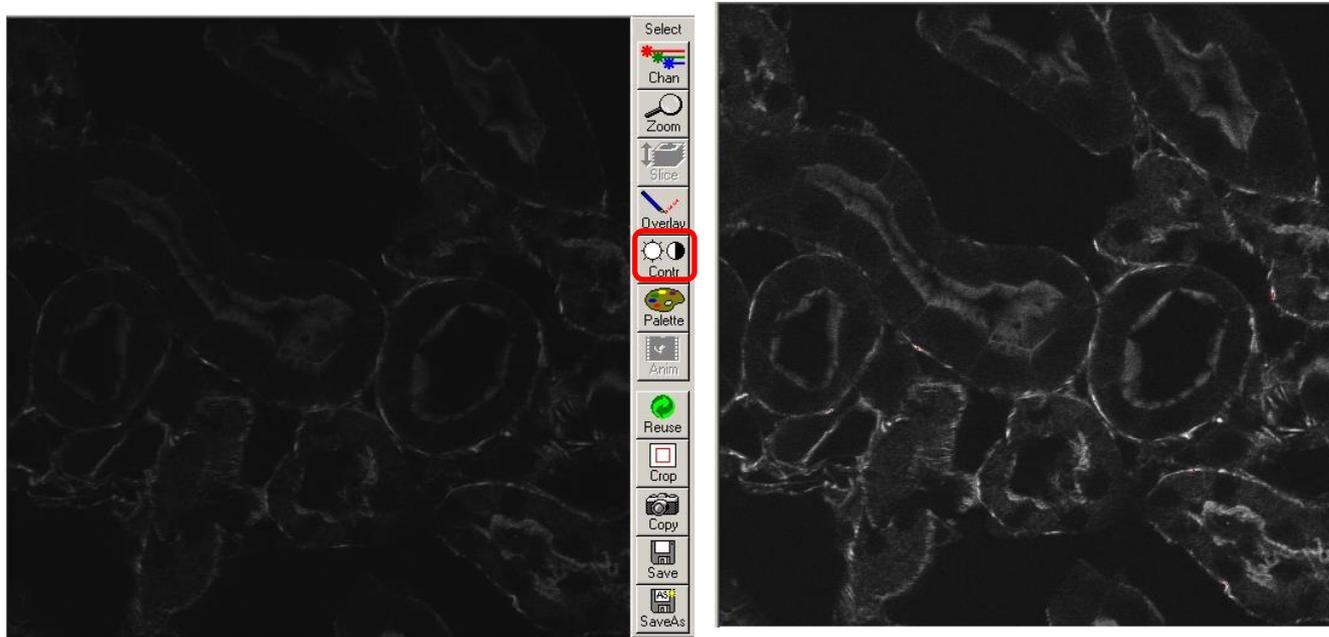


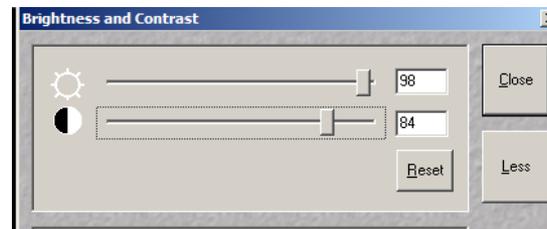
Image Too Dim

An image that is too dim can be made brighter using contrast enhancement



The image on the left is the original Alexa 568 image. The image on the right is after contrast enhancement.

To open the **Brightness and Contrast** window click on the **Contrast** button to the right of the image.



Remember: You can always make an image brighter but you cannot make it dimmer

Improving DIC Images

DIC Images can also be improved by using contrast enhancement

