

INTRODUCTION
TO
IMAGE PROCESSING

EEE410

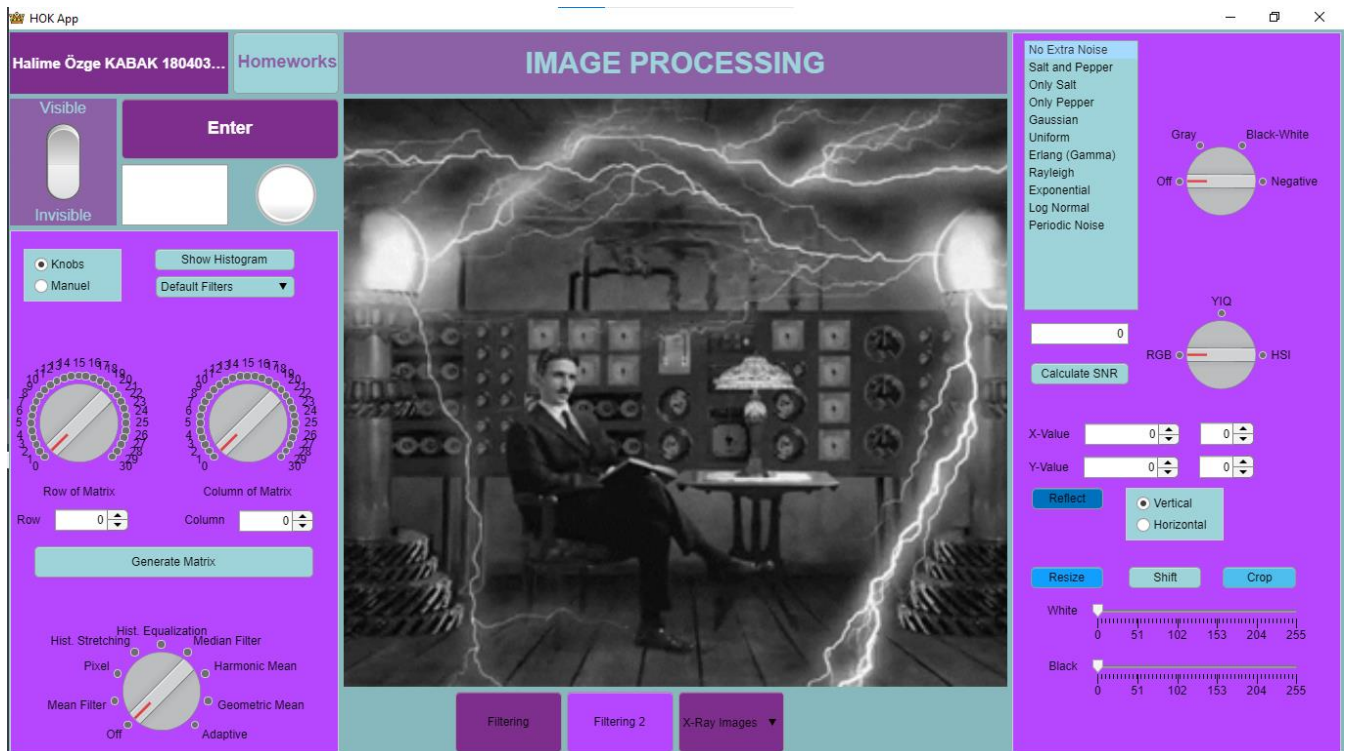
HOMEWORK 4

HALİME ÖZGE KABAK

180403001

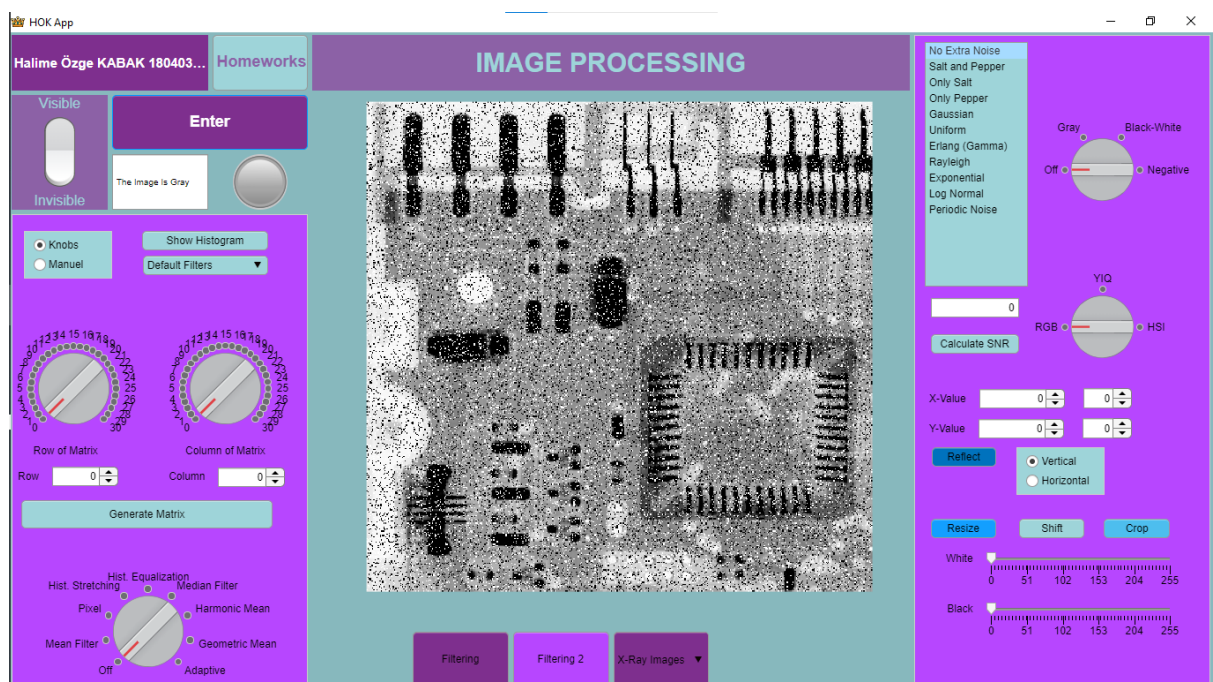
◆ MATLAB

❖ This is my graphical user interface in MATLAB.

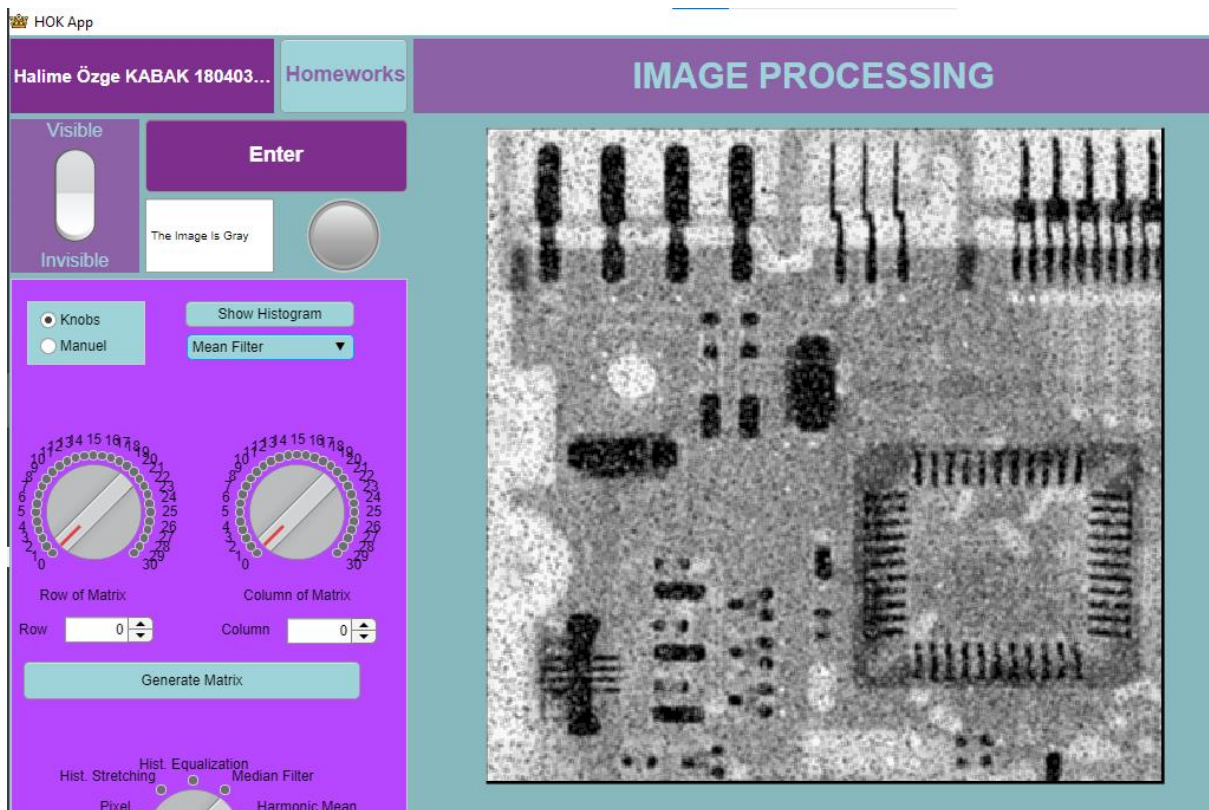


❖ I added median, mean, max and min filter to remove salt and pepper noise from the given picture. The min and max filters are 3x3 by default, but the size of the median and mean filter can be adjusted by the user. These operations can be done in both gray and RGB images.

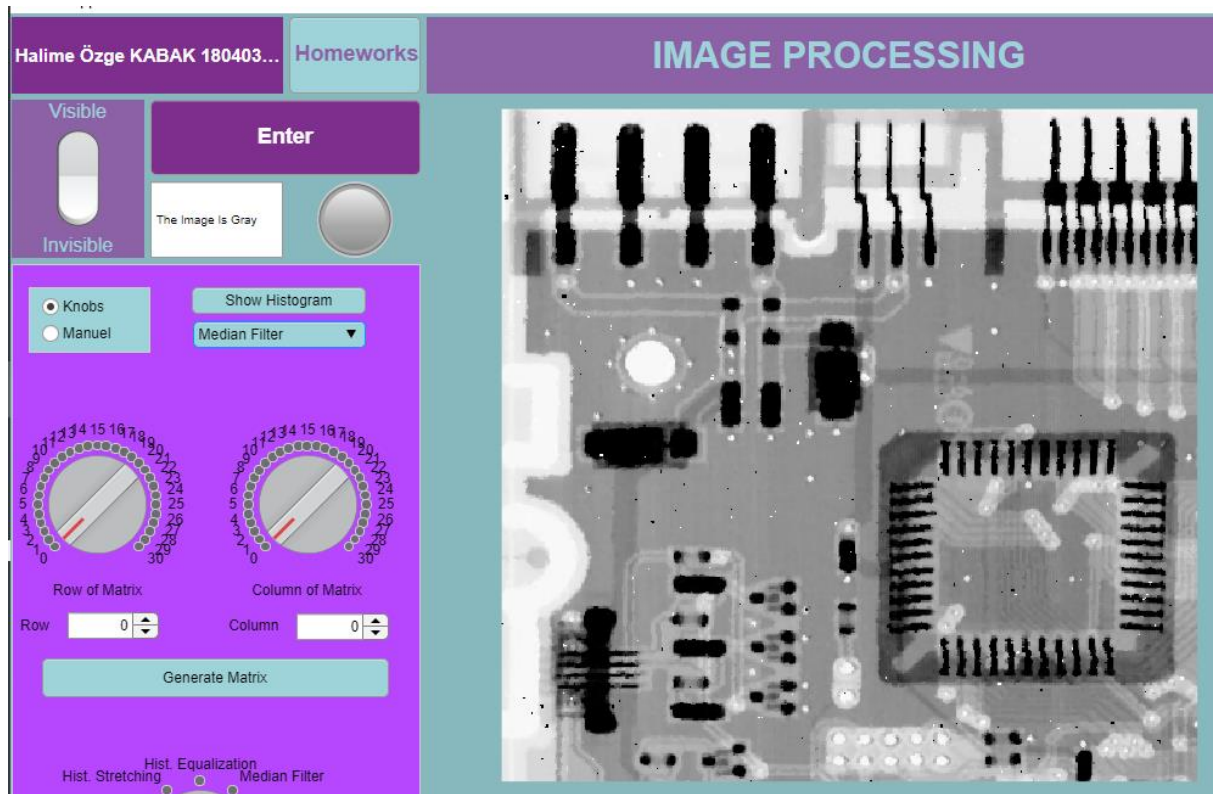
➤ Initial Image



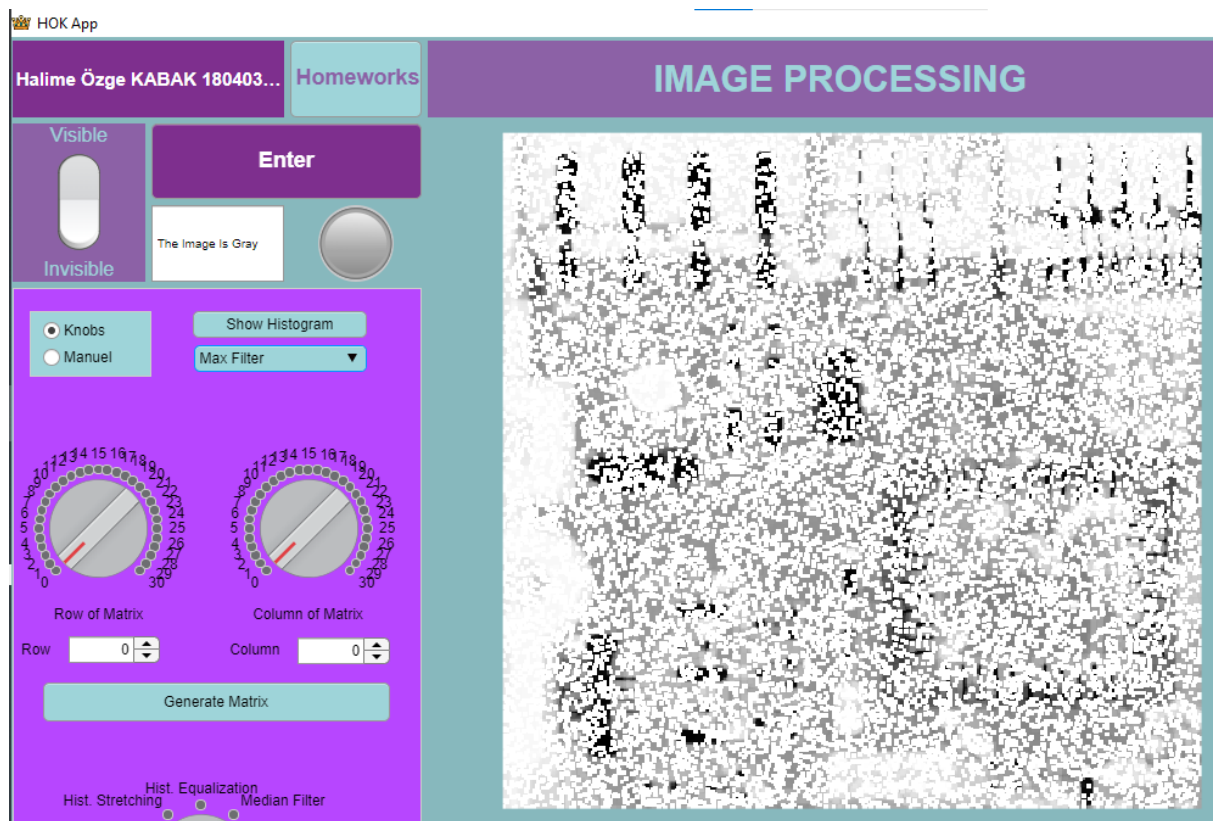
➤ After 3x3 Mean Filter



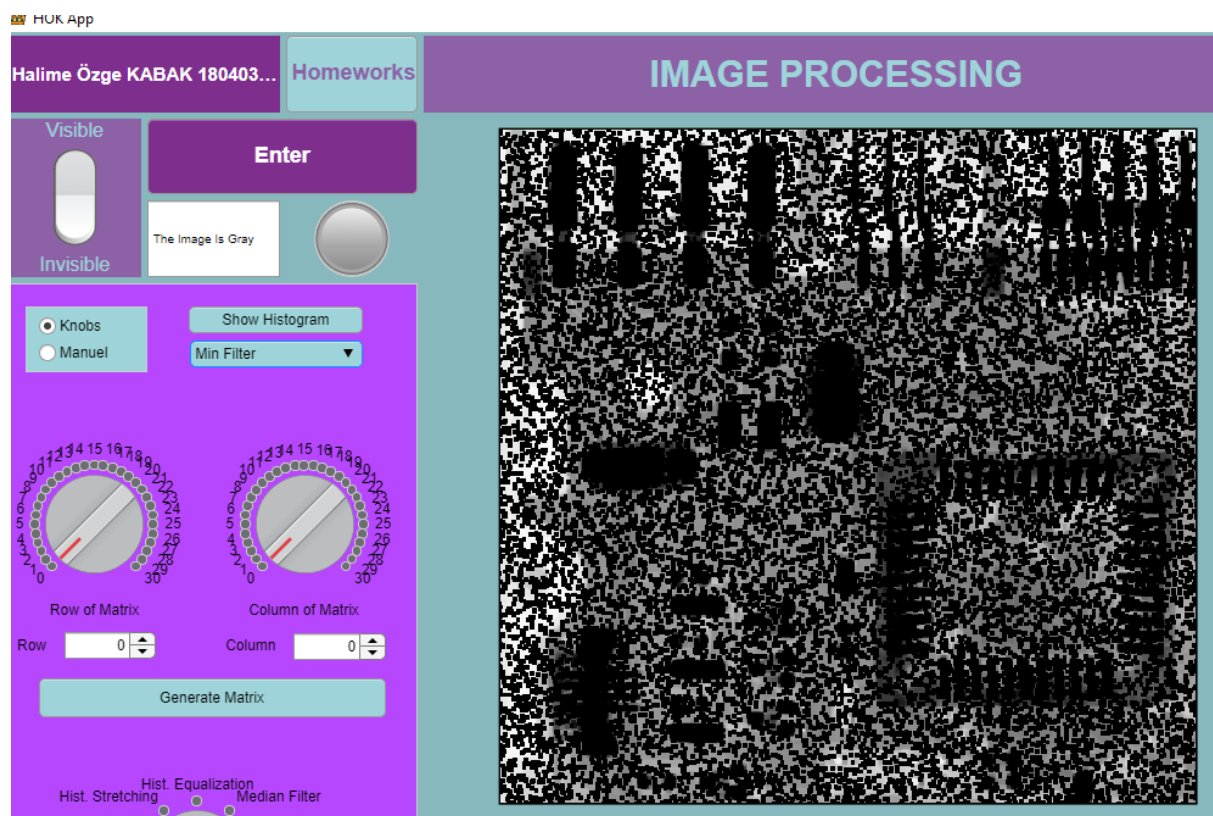
➤ After 3x3 Median Filter



➤ After 3x3 Max Filter

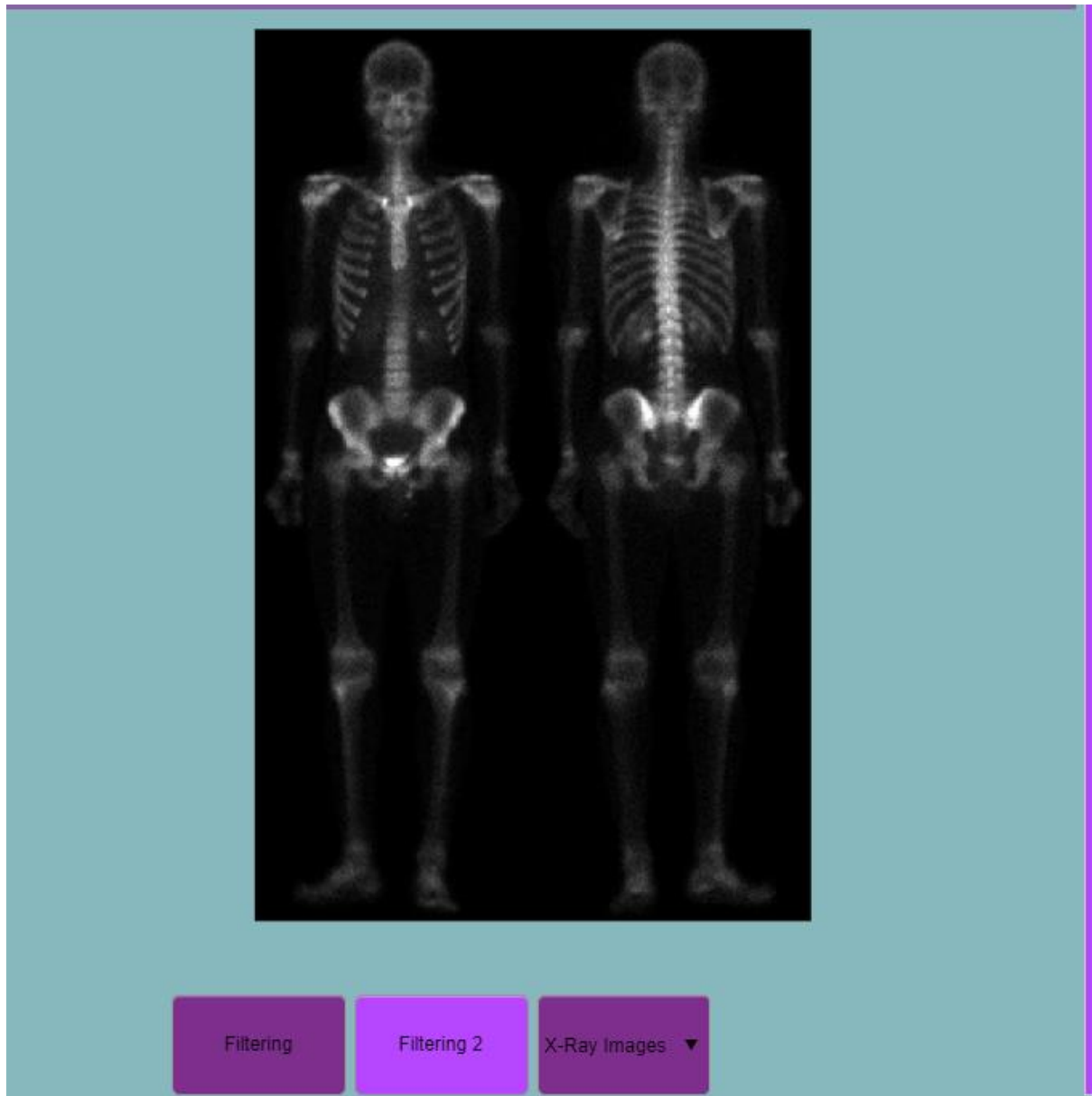


➤ After 3x3 Min Filter



❖ I applied the X-ray picture given in the homework step by step from a to h.

➤ **Image A**



➤ **Image B**



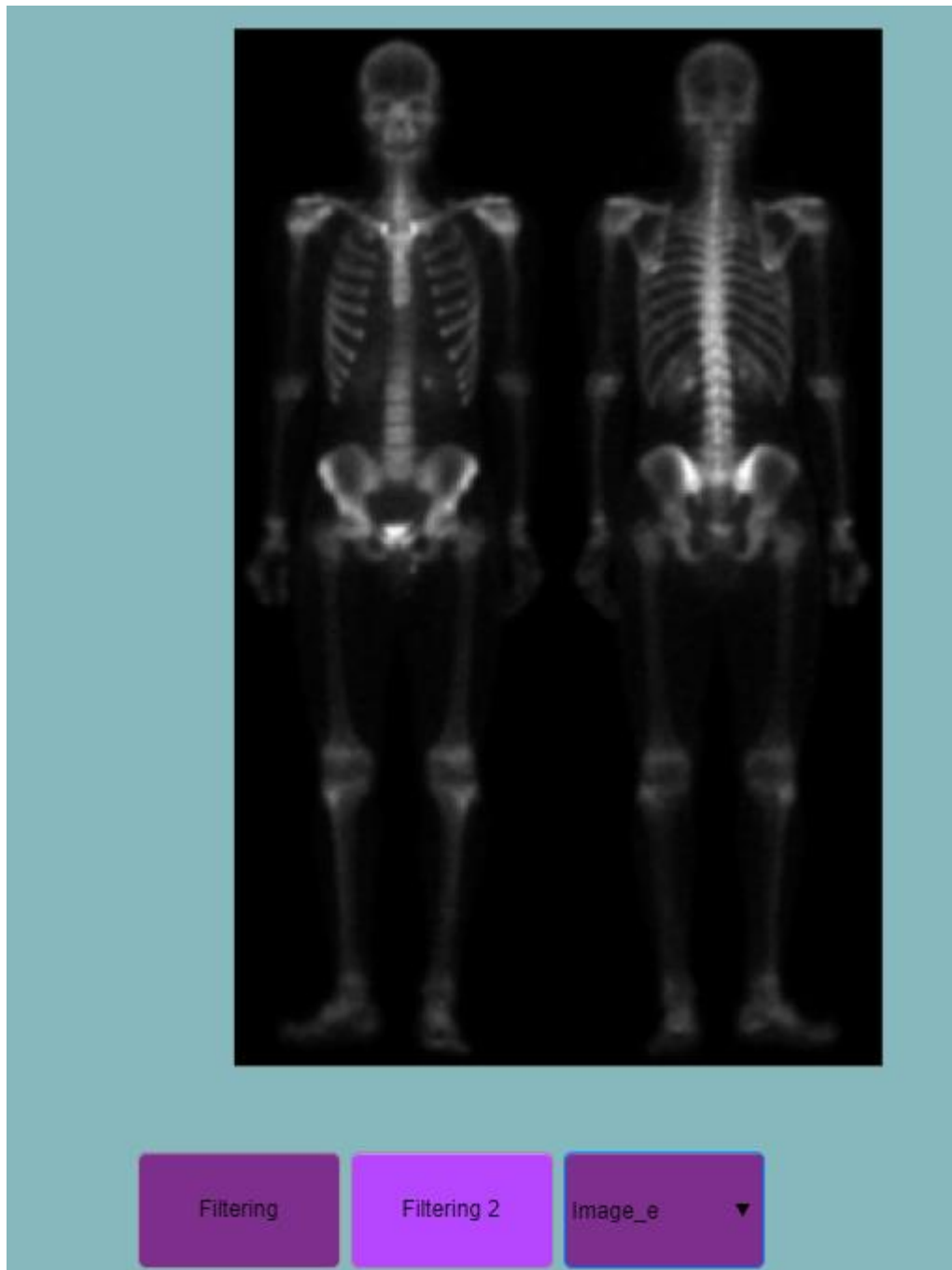
➤ Image C



➤ Image D



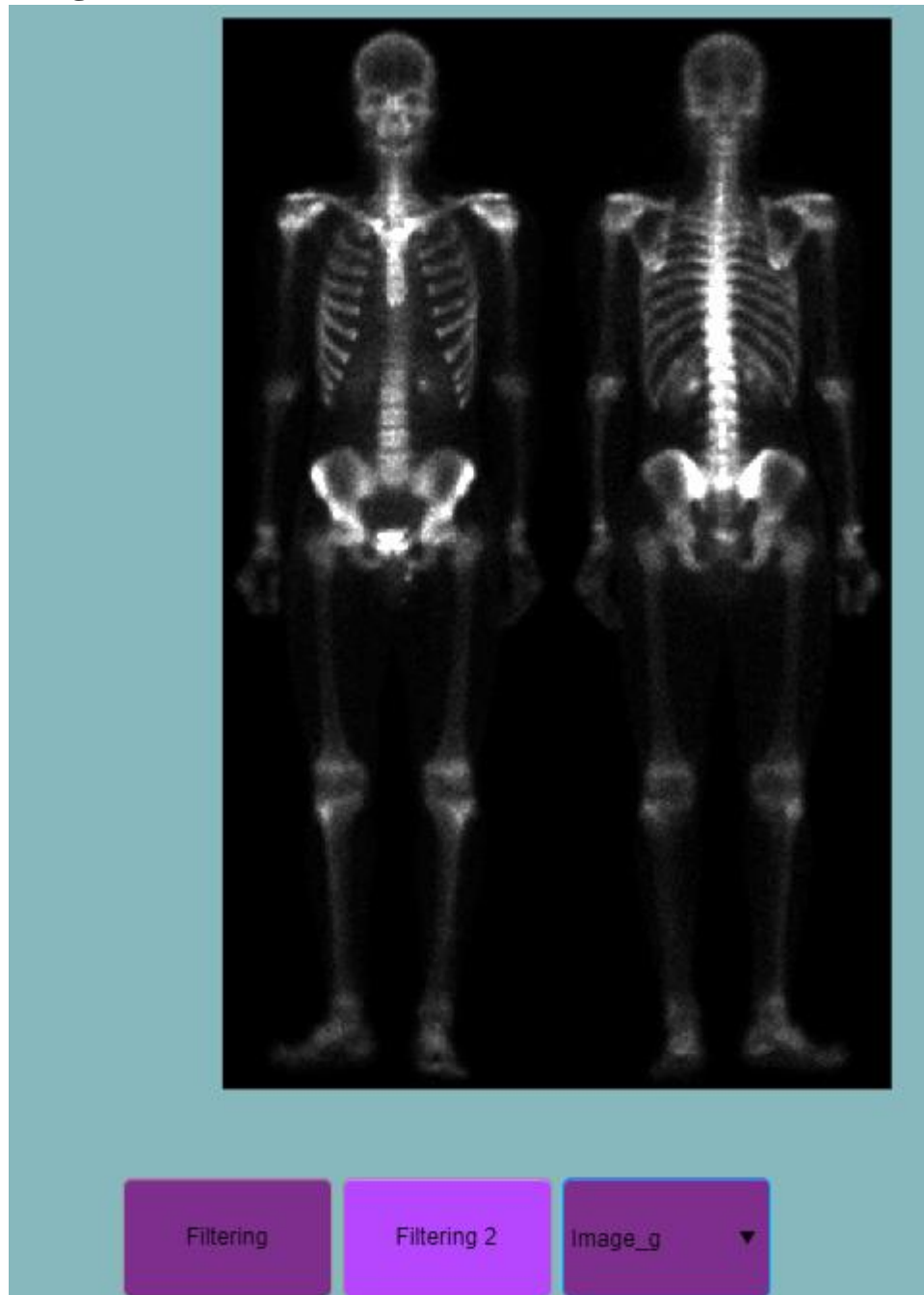
➤ Image E



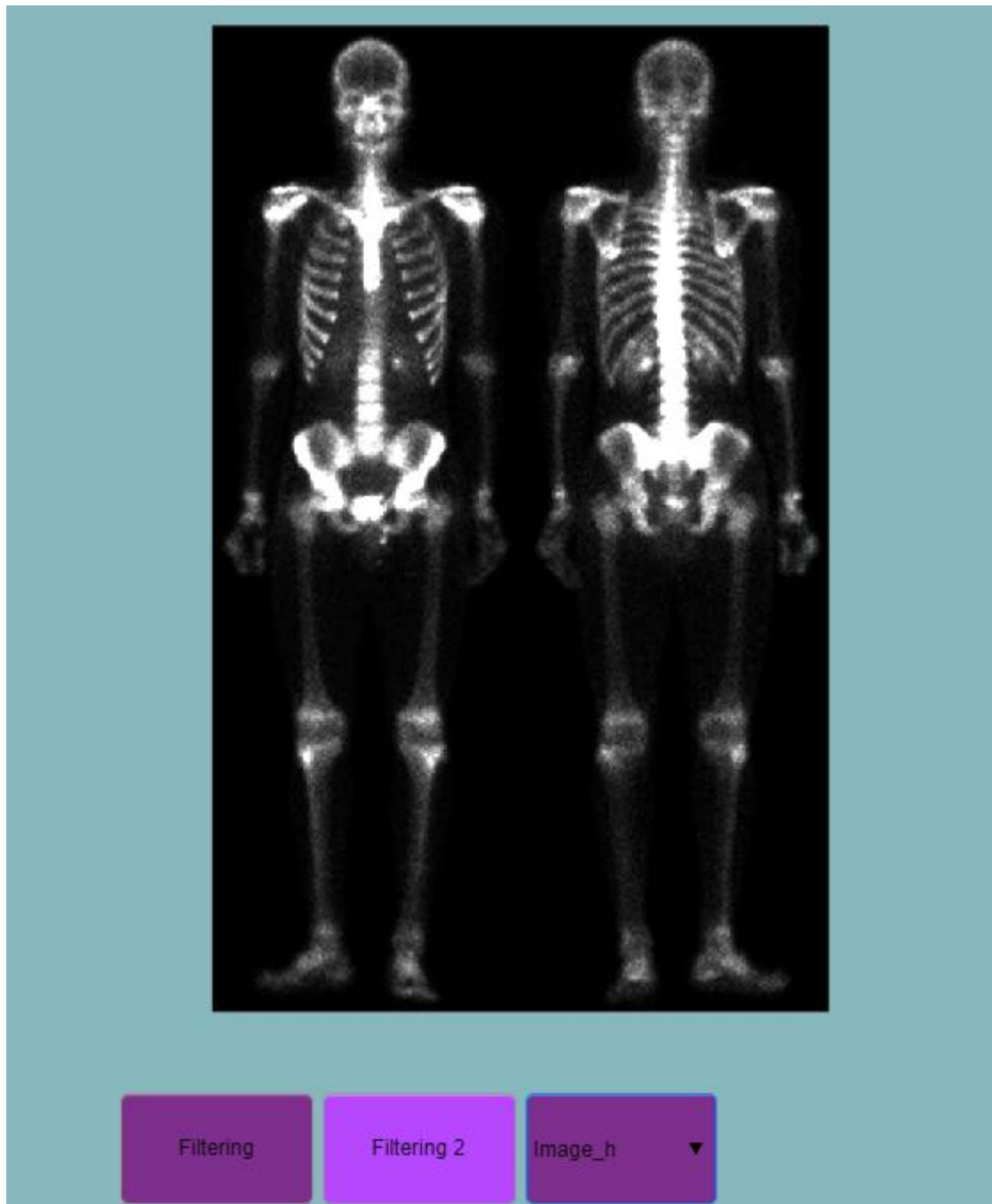
➤ **Image F**



➤ Image G

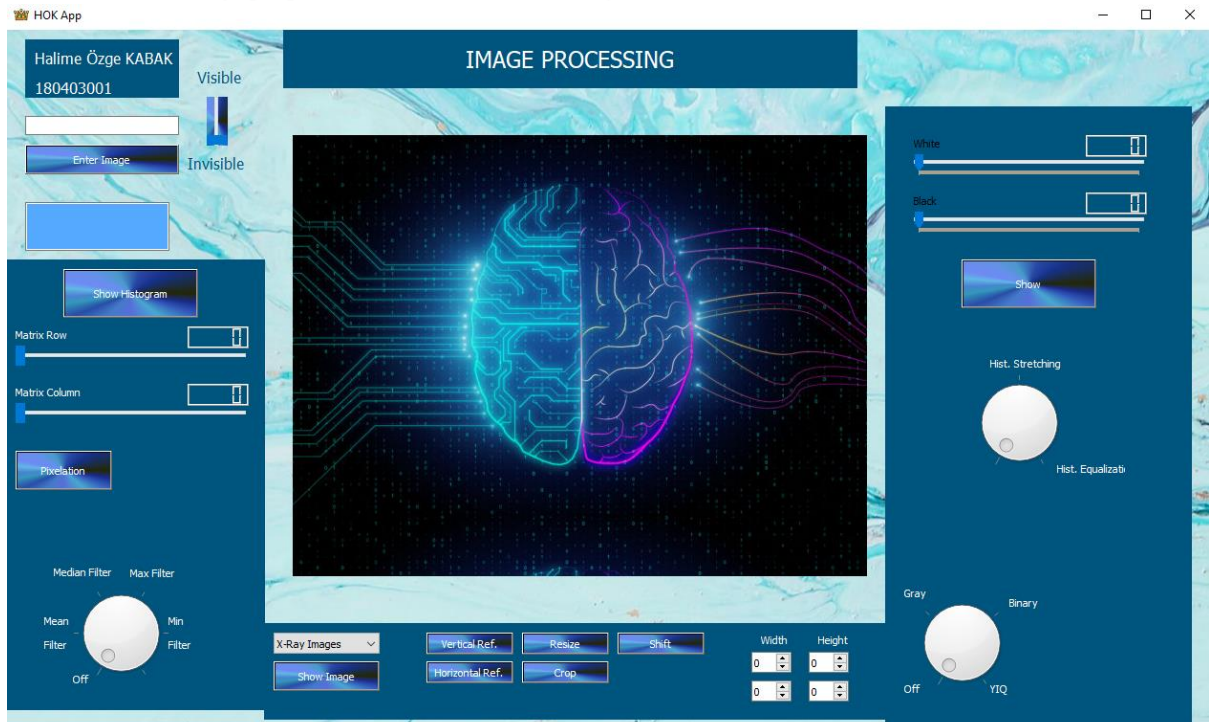


➤ Image H



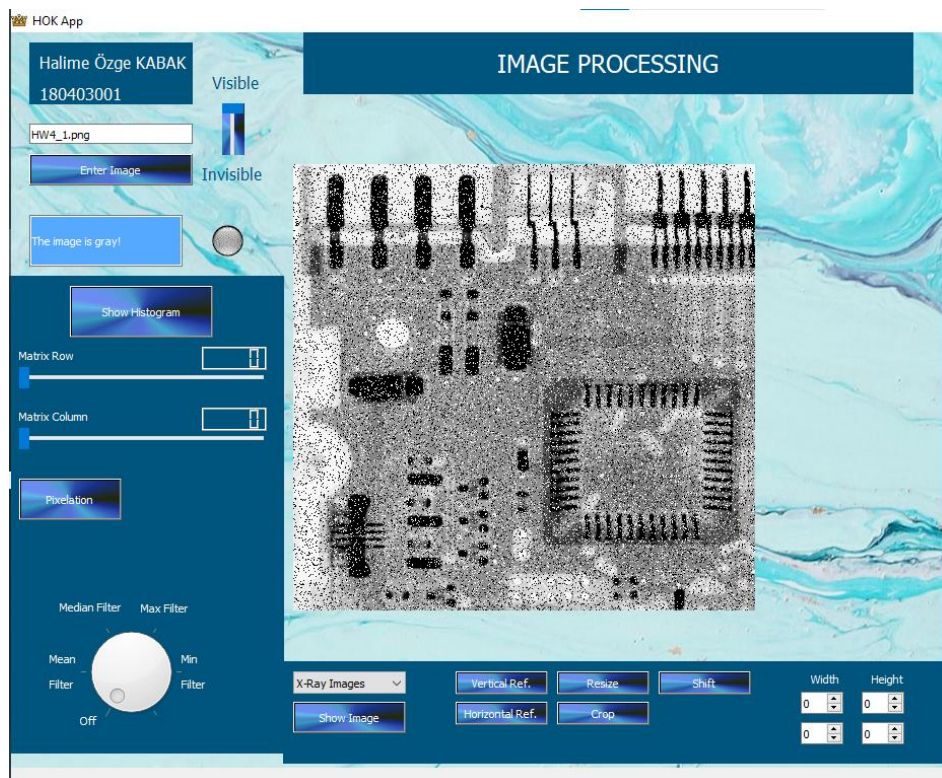
◆ PyQT

❖ This is my graphical user interface in PyQT.

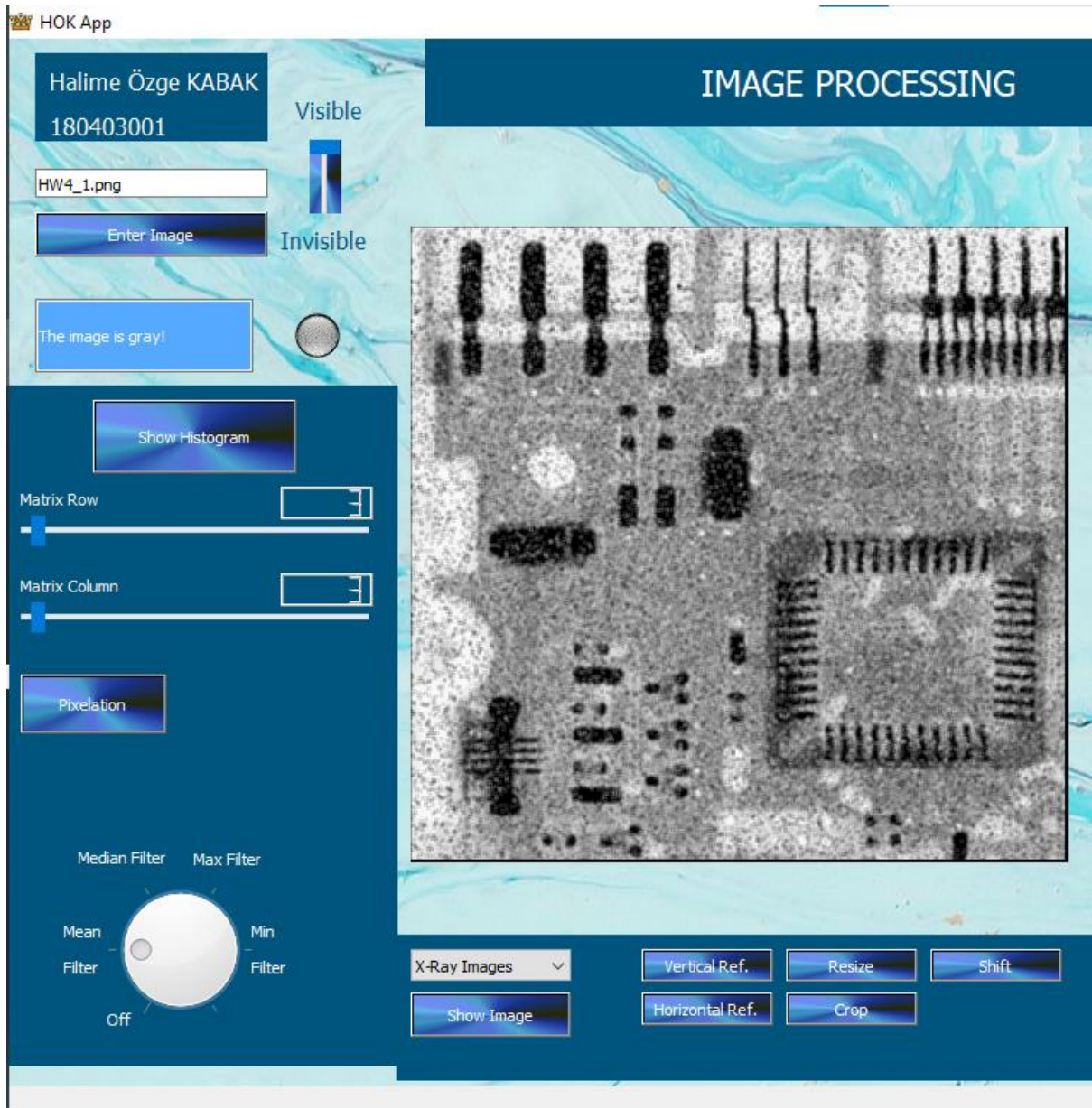


❖ I added median, mean, max and min filter to remove salt and pepper noise from the given picture. The min and max filters are 3x3 by default, but the size of the median and mean filter can be adjusted by the user. These operations can be done in both gray and RGB images.

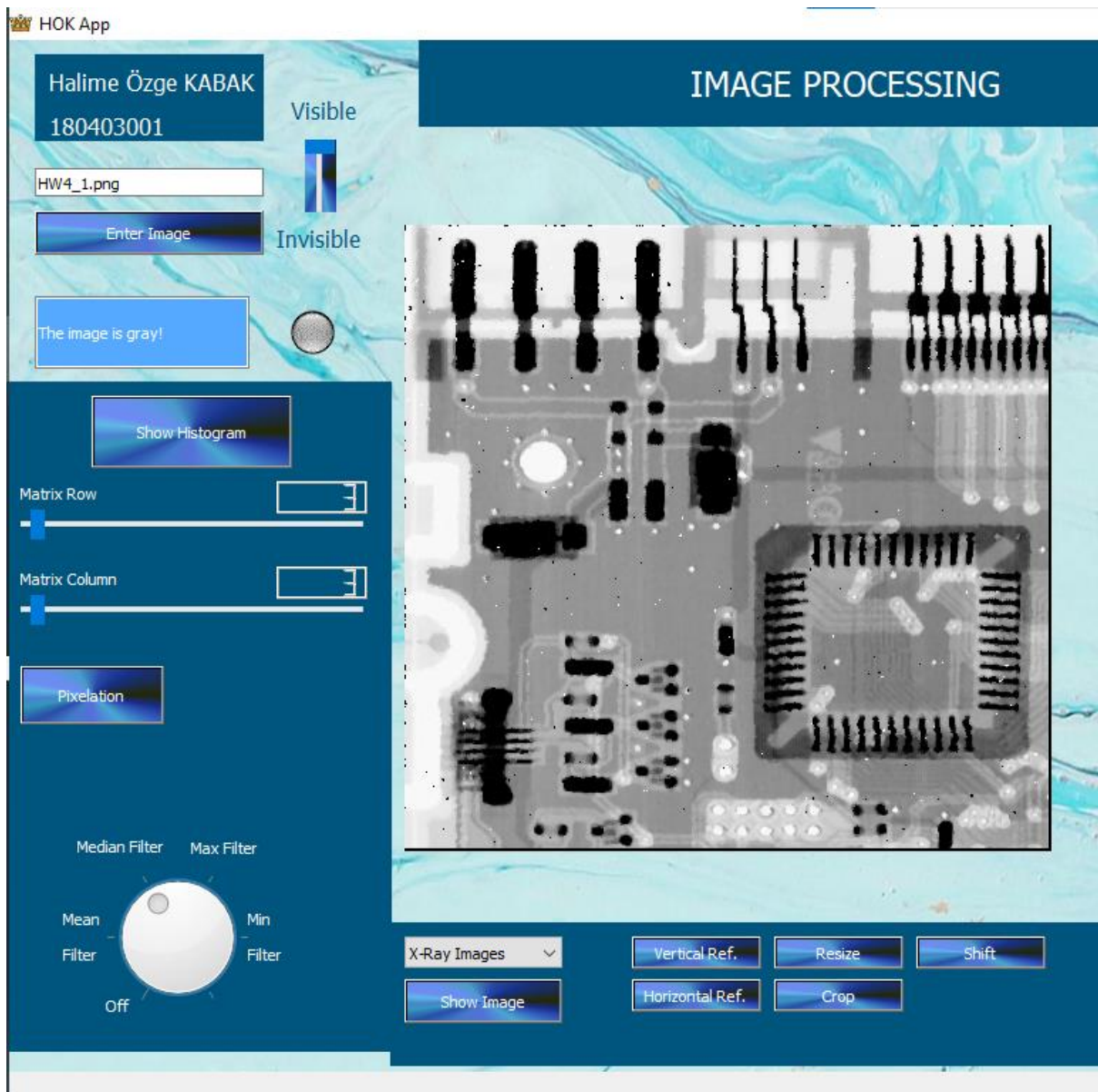
➤ Initial Image



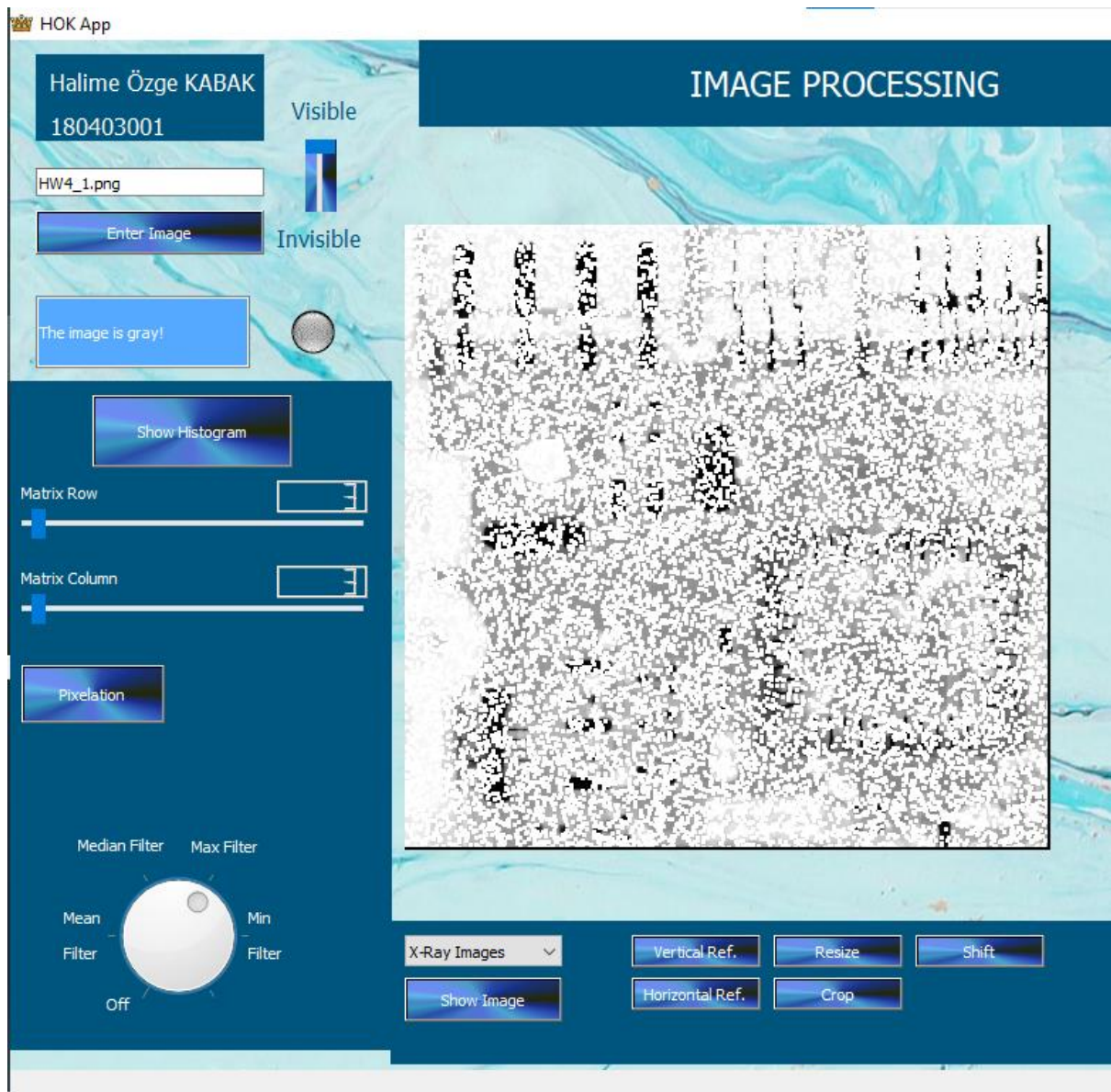
➤ 3x3 Mean Filter



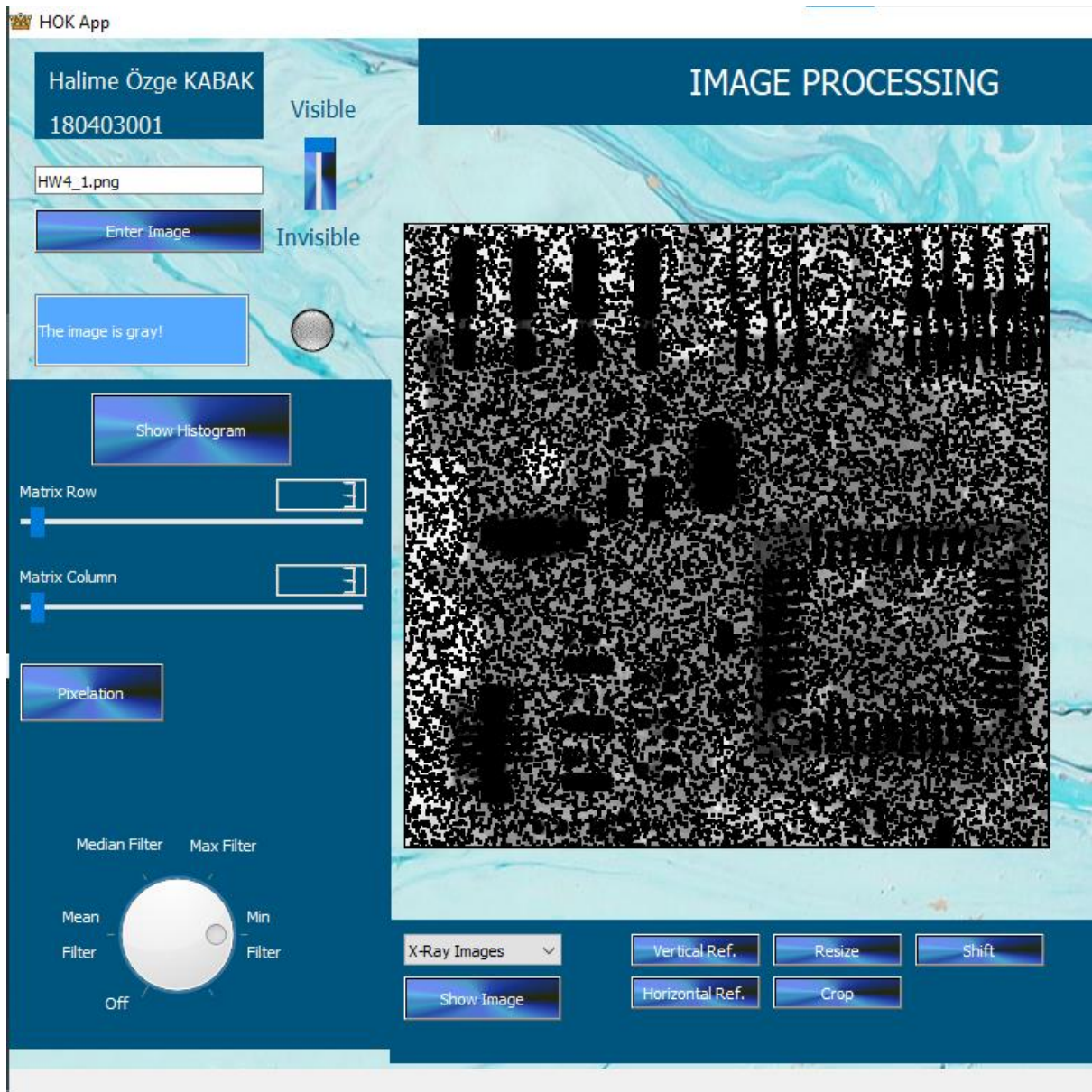
➤ 3x3 Median Filter



➤ 3x3 Max Filter

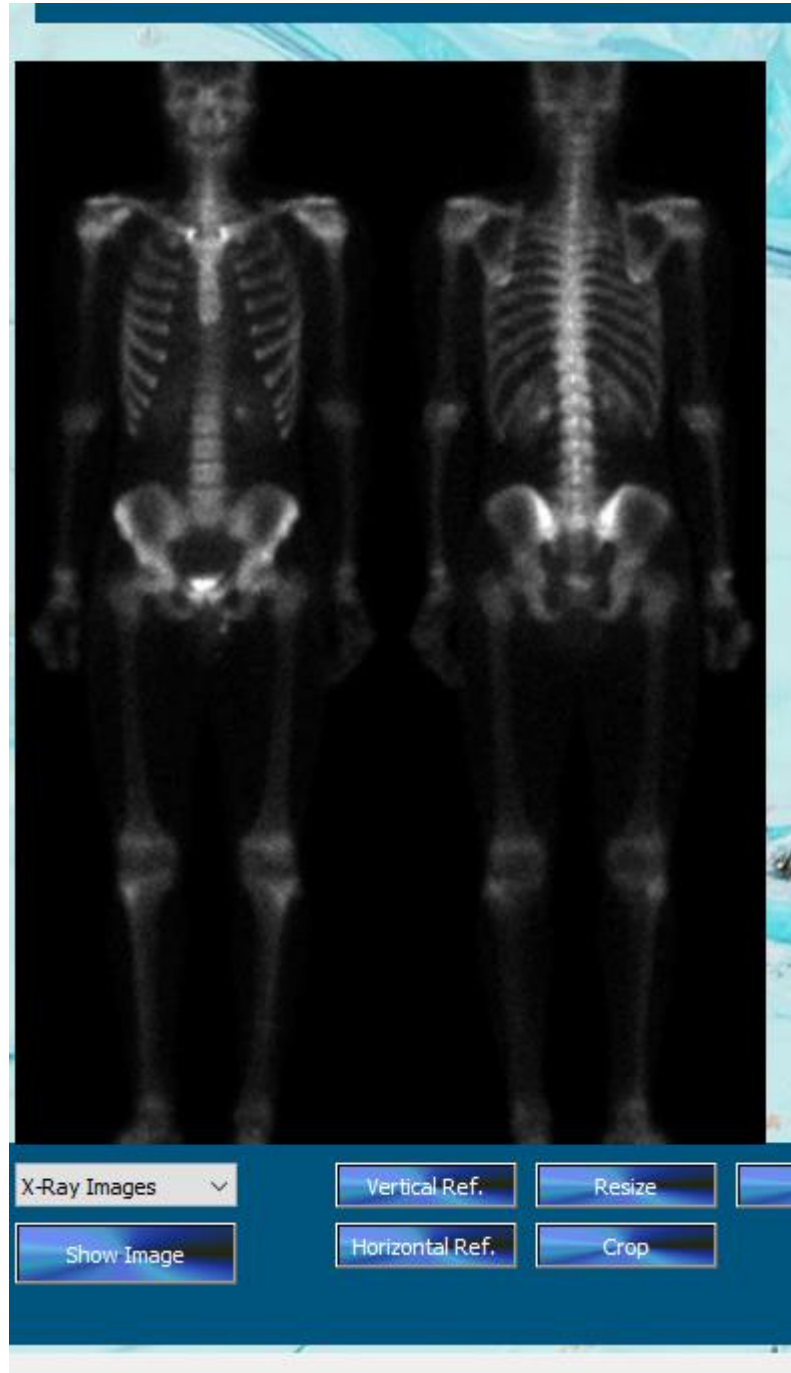


➤ 3x3 Min Filter

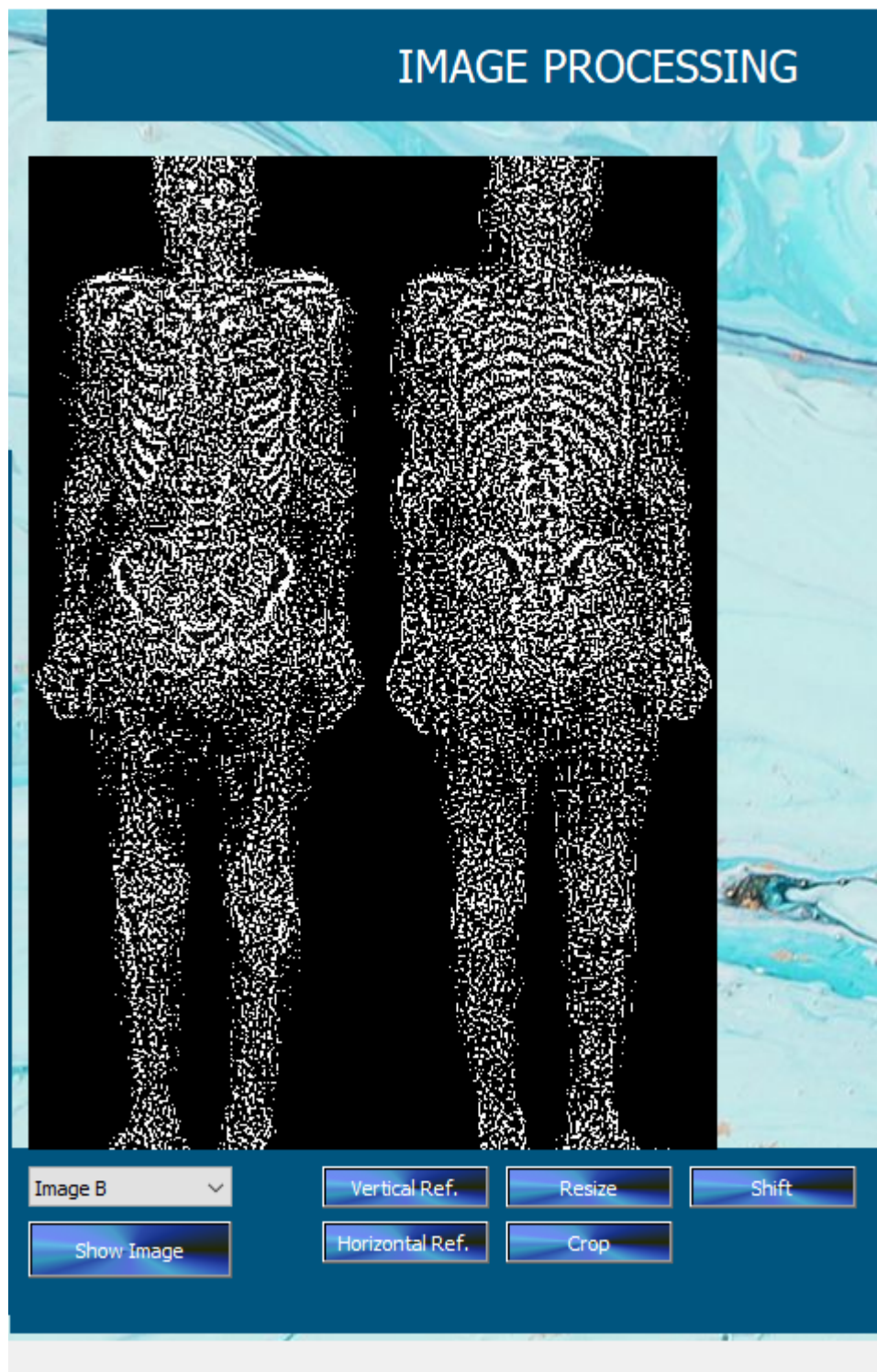


❖ I applied the X-ray picture given in the homework step by step from a to h.

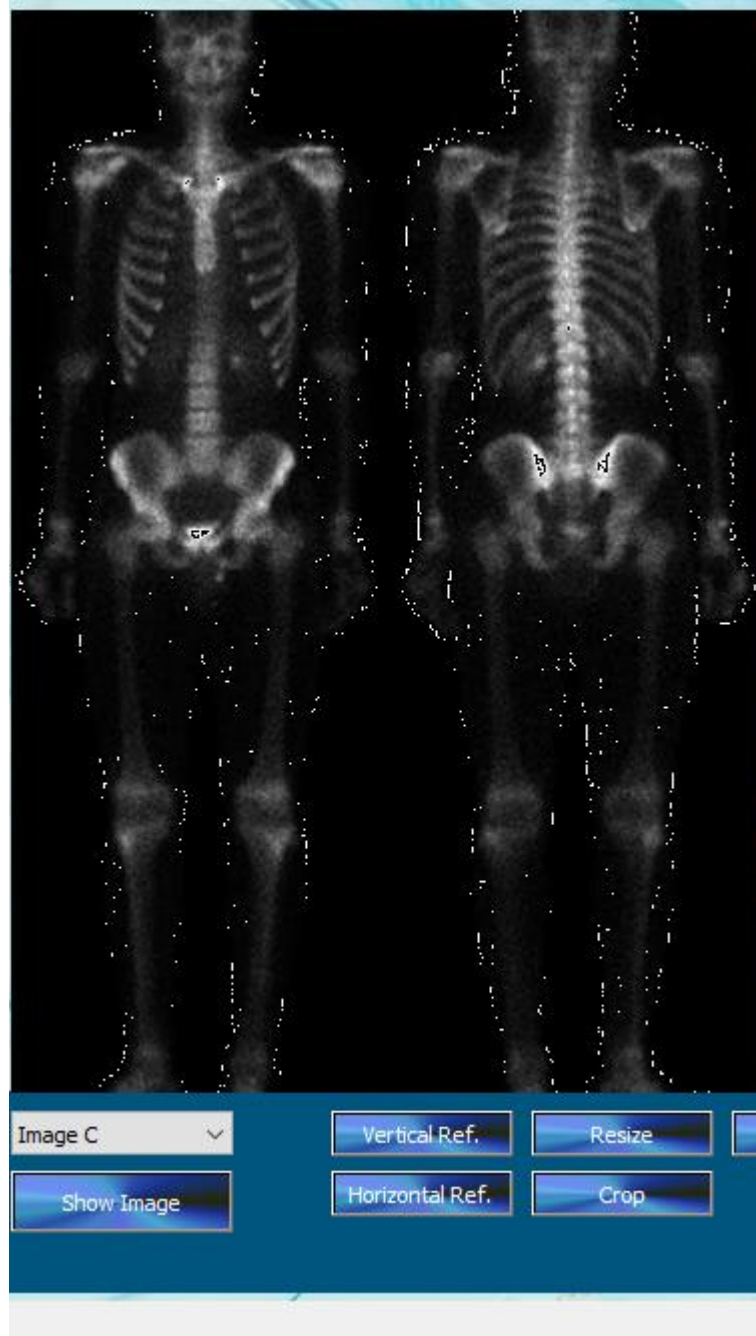
➤ **Image A**



➤ Image B



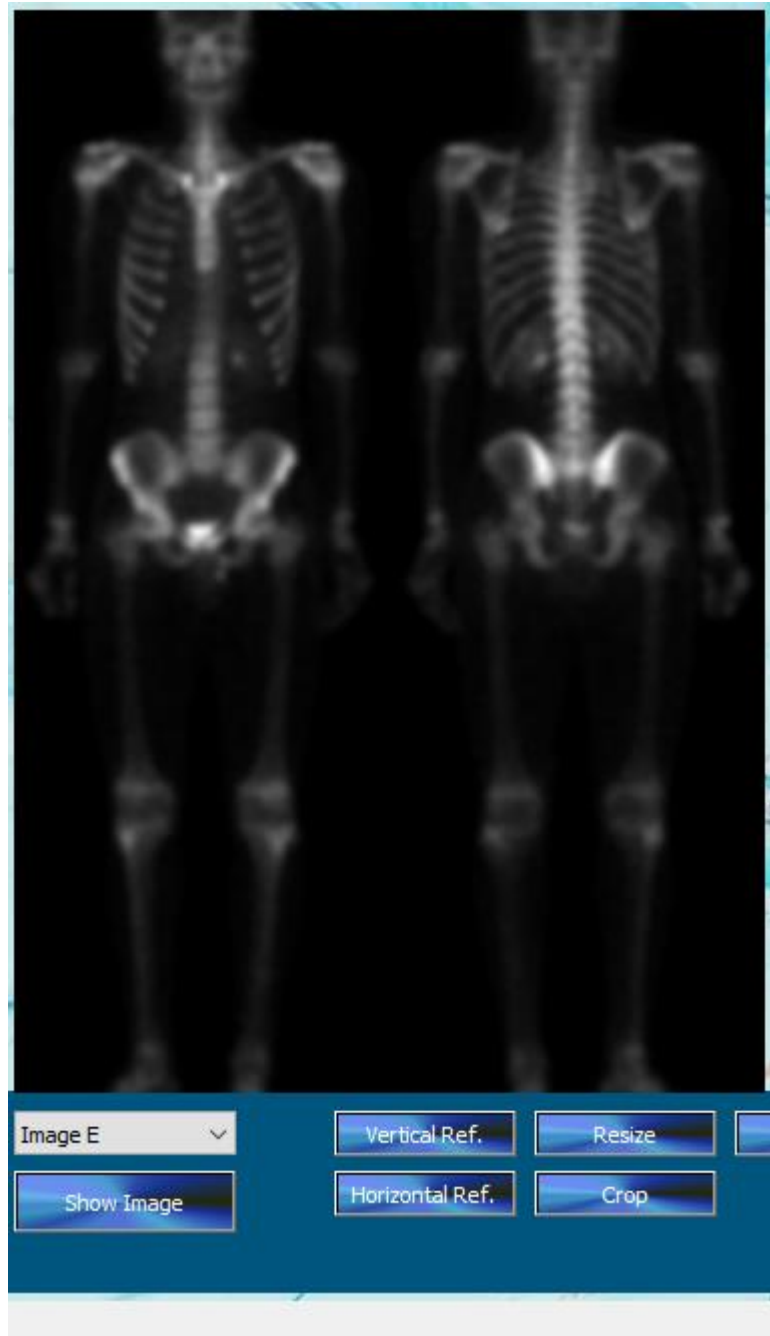
➤ Image C



➤ Image D



➤ **Image E**



➤ **Image F**



➤ Image G



➤ Image H

