

Digital Pixelometric Study of Structures and Some Intraocular Lesions

Jorge Oscar Zárate*

Doctor in Medicine and Associate Professor of the Department of Pathology, Faculty of Medicine, University of Buenos Aires, Argentine Republic

***Corresponding Author:** Jorge Oscar Zárate, Doctor in Medicine and Associate Professor of the Department of Pathology, Faculty of Medicine, University of Buenos Aires, Argentine Republic.

Received: June 25, 2019; **Published:** July 01, 2019

This method of tissue and cellular detection of structures captured in vivo by an optical coherence tomograph is based on several aspects, namely:

1. The tissue detection of macroscopic tissues, by digital characterization.
2. The development of coloring techniques that from a histological preparation of the Retina stained with H-E, allow to have similarity comparable to that observed with the OCT in automated form, which allows us to suppose, that the reverse way is possible.
3. The resolving power of the OCT, within the framework of cyto-histological morphometric values: 5 to 50 microns.
4. The application of conventional photographic programs, such as Adobe Photo Shop, Corel in its different versions, Gimp 2, Image Pro, Mat-Scilab and the use of the scanner for capturing images
5. The application of fundamental laws of physics, computer science, and neophysics, as a theoretical proposal presented by Claude E. Shannon and Warren Weaver that give the theoretical framework that lead to the acquisition of true images in their diagnostic interrelation.

This shows the normal and pathological structures digitally processed in the sequencing of images obtained from OCT to histology (Figures 1 and 2) [1-10].

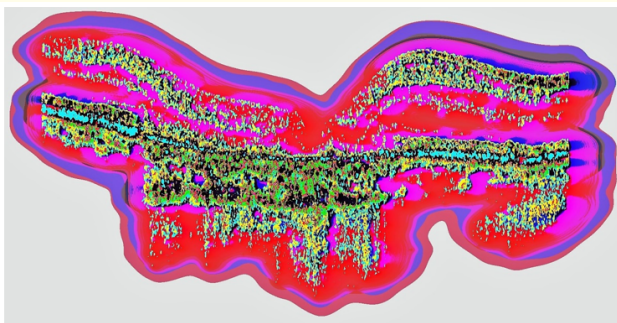


Figure 1: Optical Digital Biopsy of de OCT image. Pixelometric maps.

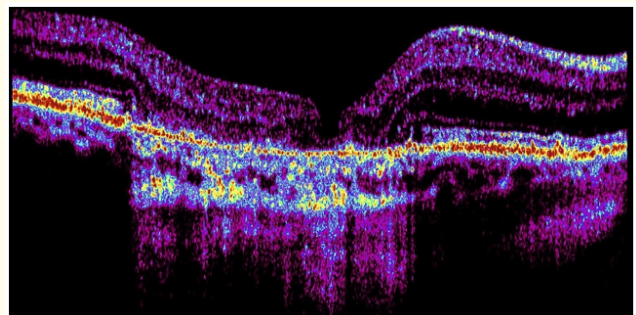


Figure 2: Physical histomorphology with architectural layers of the retina, neuroretinal and optical nerve. Pixelographic maps.

Bibliography

1. Zárate JO. "Correlation between pathological anatomy and optic nerve computerized tomography. New definition of the histologic nomenclature". Chapter 6. In Confocal Tomography of the Retina and the Optic Nerve Head. Sampaolesi R. Ed. CITY-DRUCK. Bergheimer Str.119.D-69115. Heidelberg (1999).
2. Wojtkowski M., et al. "Ophthalmic imaging by spectral optical coherencetomography". *American Journal of Ophthalmology* 138.3 (2004): 412-419.
3. Zárate JO., et al. "Optical digital biopsy. A new method of tissue and cell identification with ophthalmic applications". *Patología Revista Latinoamericana* 50.3 (2012): 179-181.
4. Zárate JO. "Optical Digital Biopsy. Brush strokes and pixels in the wonderful Latinamerican iconography". *Patología* 51.3 (2013): 206-209.
5. Zárate JO. "Digital optical biopsy. Possible extension to no other ophthalmic tissue". *Patología Revista Latinoamericana* 52 (2014): 246-247.
6. Zárate JO. "The pixelometría. New non-Euclidian geometry, biological importance". *Patología* (2014).
7. Zárate JO., et al. "Optical Digital Biopsy: Uveal Choroidal Melanoma: Case Report and Update of Technology". *Open Science Journal of Clinical Medicine* 3.2 (2015): 59-63.

8. Zárate JO., *et al.* "Optical Digital Biopsy: Subcellular Identification and Update of Technology". *Open Science Journal of Bioscience and Bioengineering* 2.2 (2015): 29-32.
9. Zárate JO. El pixel. 1a ed. Ampliada CABA. Univ. Maimonides, (REUP) (2016).
10. Zárate JO and Racca ML. "Historia y filosofía de la patología latinoamericana. Acuarelas micrográficas impresionistas de América Latina". *Patología* 46.4 (2008): 295-296.

Volume 2 Issue 7 August 2019

© All rights are reserved by Gowhar Ahmad.