## **Appropriate Name for the Anatomic Pathology Department in Nigerian Health Institutions**

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Pathology- the study of disease, is a medical discipline dedicated to the structural, functional, and biochemical changes encountered in cells, tissues, and organs embattled with disease<sup>1</sup>. It lies at the interphase between basic sciences and the practice of medicine. It transverses the expanse of clinical medicine and is the bedrock of the medical profession.<sup>1</sup>

The etiology (cause) of a disease; the biochemical mechanism of its development (pathogenesis); the structural/morphological changes it wrought; to the functional changes (clinical signs/symptoms), constitute the gamut wherein the study of pathology runs.<sup>1</sup>

Therefore, Pathology is a network of a wide spectrum of disciplines that include Anatomical (Anatomic) pathology, Chemical (clinical chemistry), Haematology, and Medical Microbiology. These four fields can be resolved into two broad groups: Anatomical pathology and pathology. While Clinical Clinical encompasses haematology, chemistry, microbiology, Anatomical pathology is concerned (amongst other things) with cytology, surgical pathology (histopathology), autopsy pathology.

Cytopathology studies changes caused by disease in individual cells, while histopathology addresses these changes at the level of the tissue. <sup>3,4</sup>Autopsy (necropsy) systematically examines organs/tissues

from the death to study pathologic changes thereby unraveling the cause of death.<sup>5</sup>

Across the world, the nomenclature for Anatomical pathology as a department/division or service varies widely. 6,7,8,9,10,11,12,13

We analyzed the names employed in Nigeria's federal health facilities as a reference. The 36 states of Nigeria and the federal capital territory Abuja, spread across the six geo-political regions of the country, have at least one Federal medical facility either as a medical center or a teaching hospital.

We collated the names given to the pathology department that undertake the services of histology, cytology, and autopsy. This information was gotten from phone calls, internet, and printed (journals). These documents information served as checks to one-another. All federal centers without functional department/unit were excluded from the study. Also in the exclusion list are all non-Federal government hospitals (state owned, faith based, and private hospitals). Furthermore, the additional services like molecular pathology or forensic medicine used to name some of the departments in few of these centers was excluded. The information so realized was analyzed using Epi Info statistical software and presented in a table.

Thirty two federal centers were found to have a pathology department/unit undertaking the services of histology, cytology, and autopsy. The names used for this department across the country include:

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Histopathology, 13(40.63%); Morbid Anatomy, 7(21.88%); Pathology, 7(21.88%); and Anatomical pathology, 5(15.63%). The result is presented in

the table below show this spread across the six geo-political regions of the Nigeria.

Table of distribution of nomenclature of anatomical pathology department/division/unit according to the six geo-political regions of Nigeria

Region	Name of Department/division/unit				
	Anatomical Pathology	Histopathology	Morbid Anatomy	Pathology	Total
North East	0	3	0	0	3(9.38%)
North West	0	2	0	2	4(12.5%)
North Central	0	5	2	1	8(25%)
South East	1	1	2	1	5(15.63)
South West	2	0	2	2	6(18.75)
South South	2	2	1	1	6(18.75)
Total	5(15.63%)	13(40.63)	7(21.88)	7(21.88)	32(100%)

It is a "menu" to choose from in an attempt to christen the pathology department undertaking the services of cytology, histology, and autopsy (necropsy). The parlance of nomenclature in this field is quite fascinating.

The closest to perfection is the label "anatomical/anatomic pathology". This is because anatomy gamut involving runs histology, gross/topographical anatomy, inclusive). 14,15 The (embryology cytology pathological correlates respectively in this brand are autopsy, histopathology, and cytopathology. This gives the designation "anatomical pathology" a broader perspective, a far reaching advantage over other labels.

In our study however, anatomical pathology is the less preferred choice of federal medical facilities in Nigeria. This is in contrast to the best (top ranked) hospital in the United States<sup>16</sup>. The top five hospitals in the ranking use the name anatomical pathology to represent the department, division, or unit. <sup>6,7,8,9,10</sup>The American Board of Pathology, and the Royal College of Physicians and Surgeons of Canada, prefer this label thereby giving certification in anatomical pathology.

Morbid anatomy is next to anatomical pathology in the drive towards perfection. As much as 21.88% of medical centers in this study use this designation. Morbidity connotes disease<sup>17</sup>. The designation morbid anatomy therefore means anatomy in disease state. It therefore embraces histopathology, cytopathology, and necropsy to some degree. Although disease (morbidity) leads to death (mortality), morbidity and mortality are two separate entities<sup>18</sup>. While morbidity covers disease state in the living, mortality is an insignia of the death. As necropsy (autopsy) is an integral part of this field of pathology, the use of the label "morbid anatomy" has some "shadow" cast over it, as it does not satisfactorily address the entire scope of this discipline (especially in the postmortem state).

Histopathology in the United Kingdom (UK)encompasses surgical pathology (histology), cytopathology, and autopsy<sup>13</sup>. This is the most preferred name adopted by federal hospitals in Nigeria (up-to 40.63%). This might not be unconnected to the "homage being paid to the colonial masters". Although limited in scope, it could be argued that all aspects of anatomical pathology are tied to a subsequent histology. For instance cytopathology gives an insight into the

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benignity or malignant potential of a lesion, to guard the course of surgery. Ultimately, the tissue biopsy obtained during surgery is subjected through histology to confirm or dispel the diagnosis obtained from cytology. Furthermore, autopsy findings during dissection are interpreted in line with the results of histology from tissue biopsies taken during the procedure. In spite of these, histopathology remains a subset of the allencompassing anatomical pathology.

Finally, "pathology" as alluded to earlier is a wide discipline consisting of anatomical pathology, chemical pathology, haematology, and medical microbiology<sup>2</sup>. This brand (pathology) is "too big a name" to be used exclusively for any one of the four of its components listed above.

To conclude, options abound in the choice of a name for the department, division, or unit of pathology delivering the services of histopathology, cytopathology, and autopsy. Anatomical pathology is the label that comes closest to perfection. We therefore recommend this name to all existing hospitals, prospective facilities, and all academic bodies, offering the services or certification covered by this discipline of pathology in Nigeria and beyond.

## REFERENCES

- Kumar V, Abbas AK, Aster JC, Eds: In Robbins and Cotran Pathologic basis of disease. 9 Ed. Elsevier and Saunders; 2015: pg 9-31.
- Springhill medical center-laboratory. Available at: http://www.springhillmedicalcenter.com/what-we-do/laboratory.aspx
- 3. Cytopathology. The free dictionary by Farlex. Available at: <a href="http://medical-dictionary.thefreedictionary.com/cytopathology">http://medical-dictionary.thefreedictionary.com/cytopathology</a>
- 4. Histopathology. The free dictionary by Farlex. Available at: <a href="http://medical-dictionary.thefreedictionary.com/histopathology">http://medical-dictionary.thefreedictionary.com/histopathology</a>
- 5. Autopsy. The free dictionary by Farlex, Available at: http://medical-dictionary.thefreedictionary.com/autopsy

- Massachusetts General Hospital. About pathology services. Available at: www.massgeneral.org/pathology/about/
- 7. Departments and centers. Anatomic pathology in Minnesota. Available at:

  www.mayoclinic.org/departments-centers/laboratorymedicine-pathology/minnessota/anatomicpathology/overview.
- 8. John Hopkins Hospital: Anatomic pathology consultation services. Available at: <a href="https://www.pathology.jhu.edu/departments/services/consults.c">www.pathology.jhu.edu/departments/services/consults.c</a> fm
- UCLA Pathology and laboratory medicine. Available at: www.pathology.ucla.edu/body.cfm?id=45
- 10. Cleveland clinic. Department of pathology. Available at: <a href="www.myclevelandclinic.org/services/pathology-laboratory-medicine/departments-centers/department-pathology">www.myclevelandclinic.org/services/pathology-laboratory-medicine/departments-centers/department-pathology</a>
- 11. Christian Medical College. www.cmch.vellore.edu/static/research/pathology.html
- 12. Fortis Hospital. Available at: <u>www.fortishealthcare.com/india/clinical-</u> <u>speciality/histopathology-320</u>
- 13. The Royal College of Pathologists. Histopathology curriculum (2015). <a href="https://www.rcpath.org/resourcelibrary/histopathology-curriculum-2015-html">https://www.rcpath.org/resourcelibrary/histopathology-curriculum-2015-html</a>
- 14. Stanbring S, Ed. The anatomical basis of clinical practice: 39<sup>th</sup> edition. Philadelphia, Elsevier; 2008: pgl-2.
- Cytopathology. Available at: <a href="http://www.aamc.org/cim/specialty/list/us/342322/cytopathology">http://www.aamc.org/cim/specialty/list/us/342322/cytopathology</a> -pathology.html
- 16. New report ranks the best hospitals in America. Available at: <a href="www.cbsnews.com/news/us-news-and-world-report-ranks-best-hospitals-in-america">www.cbsnews.com/news/us-news-and-world-report-ranks-best-hospitals-in-america</a>
- 17. Principle of epidemiology: Lesson 3, section 2/Self-study course SS1978/CDC. Available from: <a href="http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson3/section2.html">http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson3/section2.html</a>
- 18. Mortality vs Morbidity-Difference and comparison. Available at: <a href="http://www.diffen.com/difference/Morbidity\_vs\_Mort">http://www.diffen.com/difference/Morbidity\_vs\_Mort</a> ality

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