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## EDITORIAL

# LIVING IN THE CONTEMPORARY DIAGNOSTIC ERA; PATHOLOGIST'S PERSPECTIVE

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The medical sciences involved with diagnostics, including Pathology and Radiology constitute a critical link in healthcare system. In today's world of digitalization where informatics, slide imaging systems and high-end radiologic techniques are increasingly being employed for diagnosis, the roles of the pathologist and radiologist are evolving into active members of multidisciplinary teams for optimum care delivery to the patient.<sup>1</sup>

Talking about Pathology, the discipline has evolved over centuries from a humble beginning in naked eye examination of autopsies.<sup>1</sup> As the era of microscopy dawned, it began to be realized that the basis of diseases lies at cellular level. During all these phases of evolution, pathology remained a clinical discipline.<sup>2</sup> Although today's pathologists have largely lost direct contact with the patients, but, nevertheless they are the guardians of patients' samples on their behalf, and as such a part of quality-of-care practices.<sup>3</sup> Pathologists' responsibility to the patient is unequivocal, as has been estimated that over 70% of the clinical diagnoses and patient management decisions depend on laboratory tests.<sup>4</sup>

New technologies have emerged since the successful completion of human genome project and now one hears of genomics, proteomics, bio-informatics etc to count a few. These are being employed for diagnostic purposes as well currently. On the other hand, the surgical manipulation techniques are becoming more refined; the emphasis being as little trauma to the patient as is possible. In current scenario, the volume of work for the pathologist is on a rise, as new diagnostic, prognostic and predictive tests keep pouring in regularly.<sup>5</sup> This generally applies to all the subspecialties of the discipline. It is not only the volume of work with which one has to cope but the expectations of the clinicians have to be dealt with amicably.<sup>6</sup>

To keep pace with these advancements, it is the need of the hour that the working of healthcare providers is integrated for meaningful outcomes for the patients.

Instead of isolated functioning, teamwork is the order of the day.<sup>7</sup> Teamwork in the diagnostic process is neither static nor are there fixed diagnostic teams; instead, participation in diagnostic process is often dynamic, depending on what areas of expertise are needed for a specific patient. Treatment planning conferences are a form of such a coordination of health care professionals, getting together to review and discuss the medical condition and treatment options of a patient.<sup>8</sup> The participants include surgeons, medical oncologists, radiologists, radiation oncologists, pathologists, and other collaborating health care professionals. An advantage of this approach is that it provides a collaborative environment where an intra- and inter-professional team of clinicians can share information and opinions.<sup>9</sup>

Creating a culture that encourages such professional collaboration is critical. Health care organizations should support teamwork among pathologists, radiologists, other diagnosticians, and treating health care professionals by forming diagnostic management teams (DMTs).<sup>10</sup>

These evolutionary changes demand that the diagnosticians, including pathologists, should adapt to newer technologies, with modifications of practices in vogue. The challenge is that not only the pathologist has to be better equipped and fast, but accurate as well. Getting faster is not a real challenge now if one has resources at his/her disposal for these high-end technologies. The turn-around-times (TATs) in the laboratories are on a decrease generally. This requires a paradigm shift in the basic format of working. The concept of sub-specialty practice is now well established in West. Nobody can boast of knowing everything. Such a shift offers huge benefits for all the stakeholders; it sheds the load off the pathologist so that he finds more time for academic and research activities; as the sub-specialist has deeper experience into his/her area of expertise, he is more beneficial for the patient and clinician together.<sup>11</sup>

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A basic prerequisite of such an improvement is appropriateness and completeness of the information the pathologist is receiving from clinicians because this determines the former's response in turn. The clinicians need increasingly elaborate yet relevant information. The pathologist is now required to define individual risks and prognosis to enable the clinician to monitor disease and institute targeted therapies. In turn, he needs pertinent details of patient's disease to generate a meaningful diagnosis or to formulate the differentials.

As is well known, pathology is an interpretive as well as integrative discipline.<sup>10</sup> It integrates clinical information, imaging findings, and other relevant data into microscopy and consolidates it with specialized studies like immunofluorescence, immunohistochemistry, flow cytometry etc to render an all-inclusive report which is useful to the treating physician and patient. For the improvement of the

quality of reports, and also to avoid missing essential data, synoptic reports are in vogue world-wide. There are guidelines in place which document the essential features to be incorporated into the reports for every type of specimen. This includes the prognostic and predictive data as well, where required.<sup>11</sup> All the members of the multidisciplinary team are responsible to adequately perform their role to make this model a success. The ultimate beneficiary is the patient and with him, the healthcare delivery system.

A renowned American social philosopher, Eric Hoffer, once said "In a time of drastic change, it is the learners who inherit the future. The learned usually find themselves equipped to live in a world that no longer exists".

Let us not be so learned that our ability to live in the new world is compromised.

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