

The transdisciplinary essence of neuroradiology: An elective affinity and the fil rouge of our profession

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Dear Readers,

Some weeks ago, in the first week of October, the curtains came down on the “Le Fil Rouge of Atherosclerosis” conference held in Cagliari, Italy. Amidst the wealth of knowledge shared and the insights gleaned, I was reminded of a beautiful concept from Johann Wolfgang von Goethe’s novel, “Elective Affinities.” Goethe’s narrative is a manifestation of chemical laws applied to relationships, suggesting that certain entities naturally gravitate towards each other because of an inherent, elective affinity.

In the realm of medical specialties, neuroradiology is no different. While it stands as a robust pillar in its own right, its true expressive and cultural zenith is reached only when it engages in this “elective affinity” with its sister disciplines. Neuroradiology is like a multifaceted prism; it becomes luminous only when light from multiple disciplines shines through it. This light does not diffuse the prism’s essence but rather enhances, amplifies, and elucidates its myriad facets.

Modern medicine is increasingly recognizing the value of an integrated, holistic approach. The boundaries that once rigidly defined specialties are gradually becoming porous. The cross-fertilization of ideas, methodologies, and technologies among disciplines is not only encouraged but is often deemed necessary. For neuroradiologists, this means consistent communication and ongoing collaboration with colleagues from neurology, neurosurgery, pathology, and basic sciences.

Imagine a scenario where a neuroradiologist detects an abnormality on an imaging study. While the technical skills and expertise allow for the identification of the abnormality, understanding its clinical implications, prognostic value, or even its pathophysiology achieves its fullest integration through dialogue with a neurologist, neurosurgeon, or pathologist. This synergistic relationship does not dilute the importance of neuroradiology; on the contrary, it magnifies its significance. The shared insights from various specialties coalesce, offering a more comprehensive understanding of a patient’s condition.

Pathology, for instance, offers the “why” behind the “what” that radiology often detects. The microscopic

intricacies understood in pathology can provide context and depth to the macroscopic findings of neuroradiology. Similarly, the functional implications and therapeutic options presented by neurology and neurosurgery can guide neuroradiologists in their approach to diagnosis and in making recommendations.

Furthermore, it’s not just the clinical disciplines that enrich neuroradiology. The basic sciences, often viewed as theoretical and distant from clinical practice, hold profound insights. The molecular mechanisms, genetic predispositions, and biochemical pathways understood in these fields can profoundly influence the direction and interpretation of neuroradiological studies.

But, beyond the integration of knowledge, this transdisciplinary approach has another profound implication: it fosters a culture of continuous learning. Neuroradiologists, while experts in their field, rediscover the eagerness of students in the phase of acquiring new information when they engage with other specialties. This humility, the acknowledgment that no single discipline has all the answers, is perhaps the most potent tool in a physician’s arsenal.

In conclusion, while the autonomous identity of neuroradiology is undisputed, its true potential is unlocked when it embraces its elective affinities with other disciplines. Just as Goethe’s characters discovered their intrinsic connections, it is imperative for neuroradiology to recognize and nurture its bonds with sister disciplines. After all, in this era of medical advancement, it is the combined tapestry of knowledge that offers the most promise. The diverse threads of specialties, when woven together, create a resilient and vibrant fabric that best serves the needs of our patients.

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