

---

## EDITORIAL

### Imaging and Anatomic Pathology correlation in Cancers

**Dhouha Bacha<sup>1</sup>, Wael Ferjaoui<sup>2\*</sup>, Ghofrane Talbi<sup>2</sup>, , Mejri Atef<sup>2</sup>, Lassad Gharbi<sup>2</sup>, Bouraoui Saadia<sup>1</sup>**

<sup>1</sup>Department of Pathology, Mongi Slim University Hospital, Faculty of medicine of Tunis

<sup>2</sup>Department of General surgery, Mongi Slim University Hospital, Faculty of medicine of Tunis

\*Corresponding Author Tel: +216 52430099/ E mail: farjaouiwael4@gmail.com

---

Received 12.04.2020

Revised 18.04.2020

Accepted 26.05.2020

**How to cite this article:**

D Bacha, W Ferjaoui, G Talbi, , M Atef, L Gharbi, B Saadia. Imaging and Anatomic Pathology correlation in Cancers. Adv. Biores., Vol 11 (3) May 2020: 01-02

---

Correlation is defined as a mutual relationship between 2 notions, one of which implies the other and vice versa [1]. Correlation is a validated tool used in medical training. Indeed, it requires a translational and multidisciplinary approach by the integration of many medical specialties. It makes medicine, therefore, highly personalized [2]. Imaging and anatomic pathology correlation consist in comprehension (via 2 images) the histological meaning of a radiological sign (and vice versa) [3]. It's a kind of anatomic translation of imagery. Such correlation can be applied in cancers. In fact, oncology seems to be the best multidisciplinary research area in which, imaging and anatomic pathology correlation can be very useful. Thus, a new concept can be introduced: Imaging and Anatomic pathology Correlation in Cancers (IACC). The choice of the radiological image (computed tomography, magnetic resonance imaging, ultrasound, cross section, longitudinal section, early arterial phase, late arterial phase...), histological findings (fibrosis, necrosis...) must respect some pre determined educational goals (figure). IACC is an illustrated tool that can be used in association with other pedagogical patterns (Learning Clinical Reasoning, Case Based Learning) of teaching medical oncology (especially digestive oncology).

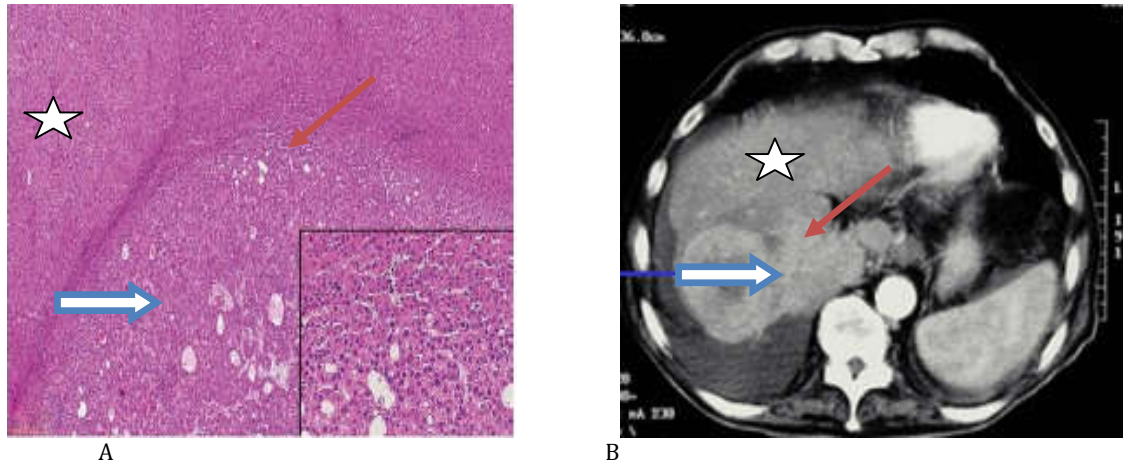
IACC is seen as a catalyst for the participation and the action of medical students.

Indeed, the learners are encouraged to:

- Interpret a sign (radiological and / or histological)
- Try to find the histological translation of a radiological sign ( and vice versa)
- To correlate a radiological sign to an histological sign (and vice versa)

IACC can also be a source of medical evaluation (formative or other) via multiple choice questions

The limit of IACC is the presence of a radiological sign that cannot be correlated with a histological sign (and vice versa) (example: The tumor microenvironment which is dynamic and cannot be visualized on imagery, usually, used in cancers. their identification needs combined imaging ex: positron-emission tomography-(PET-) CT)



**Figure: Example of Hepatocellular carcinoma to illustrate IACC**

**A: HISTOLOGICAL FEATURES**

Well-differentiated  
hepatocellular carcinoma  
[hematoxylin and eosin (HE), × 20]  
Black star: liver parenchyma  
Red arrow: fibrosis  
Blue arrow: Neoangiogenesis

**B: RADIOLOGICAL FEATURES**

Computed tomography  
(Arterial phase) showing  
Hepatocellular carcinoma  
Black star: isodensity  
Red arrow: low density  
Blue arrow: high density

**REFERENCES**

1. Definitions: correlation - Larousse French Dictionary [Internet]. [cited 13 Feb 2020]. Available at: <https://www.larousse.fr/dictionnaires/francais/corr%C3%A9lation/19435>
2. Giet D, Massart V, Stir A, Freyens A, Firket P, Boniver J. Approach of contextual complexity and multidisciplinary of medical action: setting up learning sessions for solving complex problems ( ARPc) at the end of the 2nd cycle of medical studies. *Medical pedagogy*. May 2005; 6 (2): 88-97.
3. Schillaci O, Scimeca M, Toschi N, Bonfiglio R, Urbano N, Bonanno E. Combining Diagnostic Imaging and Pathology for Improving Diagnosis and Prognosis of Cancer. de Barros ALB, éditeur. *Contrast Media & Molecular Imaging*. 1 juill 2019;2019:9429761.

**Copyright: © 2020 Society of Education.** This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.