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Heterogeneity, phenotypic and genotypic instability of the primary tumor and its metastasis

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The heterogeneity of cancers presents one of the major problems of therapeutic management, which can explain the fall of many cancer patients after treatment. The study of these changes at the level of the primary tumor and its metastasis and the thorough knowledge of points of difference would improve the therapeutic choice and thus increase the survival and quality of life of patients. The aim was to study primary cancer and its metastasis in all its aspects in order to find hypothetical explanations on the behavior of the moving cell. We performed a comparative study between the primary tumor and its secondary tumor in 10 cases of cancer diagnosed at the Department of Pathology, Hospital University Center, Sidi Bel Abbes, Algeria. Our work consisted in correlating clinical data with anatomo-pathological aspects including a histopathological re-reading of all lesions and using immuno histochemical techniques using markers: HER2, progesterone, estrogen, P53, Ki67, cytokeratin, Kappa, Lambda, to compare between the primary tumor and its metastasis in terms of the degree of differentiation (histopathological grade); the proliferative potential and the type of proliferation adopted by the moving cell; This variability can explain the treatment failure and is often based on the histopathological and biological profile of the primary tumor is not taking consideration of the tumor cells, having had the ability to depart from the primary tumor, borrow the blood stream and proliferate in another environment than the initial environment thereby confirming their aggressive potential and that should be taken into account in the therapeutic choice.

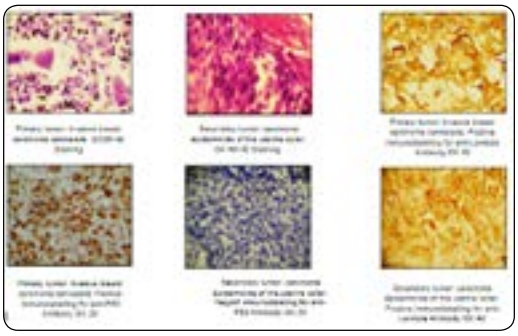

Fig 1: Primary and Secondary tumor image.

Recent Publications:

1. A F Chambers, A C Groom and I C MacDonald (2002) Dissemination and growth of cancer cells in metastatic sites. Nature Reviews Cancer 2(8):563–572.
2. S A Eccles and D R Welch (2007) Metastasis: recent discoveries and novel treatment strategies. Lancet 369(9574):1742–1757.
3. I J Fidler (2003) The pathogenesis of cancer metastasis: the seed and soil hypothesis revisited. Nature Reviews Cancer 3(6):453–458.
4. G P Gupta and J Massague (2006) Cancer metastasis: building a framework. Cell 127(4):679–695.
5. R A Gatenby and R J Gillies (2008) A micro environmental model of carcinogenesis. Nature Reviews Cancer 8(1):56–61.

Biography

PhD. Nawel Agher, young researcher, obtained his Doctor in Biology of the normal and pathological cell the case of cancer. After several trips in search of science which has been the subject of several national and international works on the behaviour of cancer cells. She published her first book under the name *"Intérêt du testing de l'HER-2 dans les cancers Estomac, Ovaire, Vessie)*,2017 (www.editions-ue.com/catalog/details//store/fr/book/978-3-639-54385-8/intérêt-du-testing-de-l-her-2-dans-les-cancers) and second *"Metastasis"* (https://www.abebooks.fr/9786202279505/Metastasis-Nawel-Agher-Abdenacer-Tou-6202279508/plp),2018 in Edition European University. She is Head of the Unit of Molecular Biology in Pathology Department of University Hospital Center *"Hassani abdelkader", Djilali Liabès University, of Sidi Bel Abbés, Algeria.*

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