

**FC-054****Is there still a place for surgical biopsies in pre-operative diagnosis of adipose and myxomatous soft-tissue tumors?**

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Introduction: Soft tissue mass is a classical clinical case, which can be worrisome, however benign in 99%. A painful lesion of a deep localization needs full exploration with CR, US, MRI, CT and frequently ends up with biopsy performing. Adipose and myxomatous tumors constitute a relevant biopsy indication because they are clinically, radiologically and histologically difficult to characterize, with a hard-to-manipulate jellyish material. Core needle biopsies are a seducing alternative compared to surgical biopsies because of their easier scheduling, their diagnostic performances and the awaited benefits for patients.

Objectives: Determining the interest of percutaneous biopsies in the pre-operative characterization and clinical management of adipose and myxomatous soft tissues tumors and stress the significance of cytogenetics techniques in benign and malignant tumors distinction.

Methods: This is a retrospective study in the regional expert imaging department of musculoskeletal soft tissues tumors in Marseille, France. From 2008 to 2012, 64 biopsies were included. Basic data was collected and classical pathological examination was performed. Their embedded performances were evaluated through final diagnosis comparison after pathological and cytogenetics (fluorescence in situ hybridization, FISH) examination of CT-scan-guided biopsies versus final operative sample.

Results: Thirteen biopsies were non contributive and needed further surgical exploration. Pathological analysis specificity was 100% when radiological classification and microscopic analysis was combined with FISH technique. Its sensitivity was of 92%, its diagnosis accuracy 91%. Its positive predictive value was of 100% and negative of 86%.

Described in 1930, this technique represents a good alternative to surgical biopsies. Their lower cost compared to standard surgery stands for a strong argument, particularly nowadays. Easy to perform, they offer real comfort for the patient thanks to their quick handling (less than 30 minutes spent in ambulatory hospital with no anesthesia consultation compared to one day in case of surgery) and their far lower complication rate. Use of a specially designed system of extraction allowing complete sample removal is mandatory. Despite their fatty even gelatinous consistency, percutaneous biopsies of adipose and myxomatous tumours are of a high level of diagnosis value and their easy-to-perform technique make them impossible to despise for optimal handling. This is particularly true since the advent of routine cytogenetics techniques like FISH, especially towards MDM2 markers for adipose tumors and CHOP for myxomatous. Breakthrough in imaging and quality of sampling allowed to increase tremendously their diagnosis capacity, if some basic rules are followed.

Conclusions: Low morbidity of this technique and patient comfort tend to favor it. However one must note that such an approach must be conceived with a specialized radiologist, trained to biopsy technique with high knowledge of musculo skeletal tumors, especially to distinguish achievable cases and high success rate zones. It is imperative that the whole sequence should be in constant interaction with the surgeon.