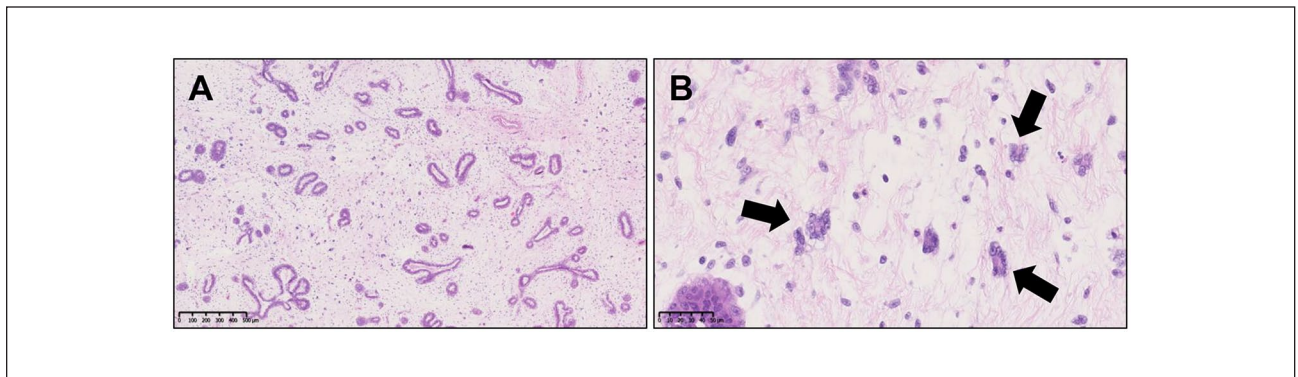


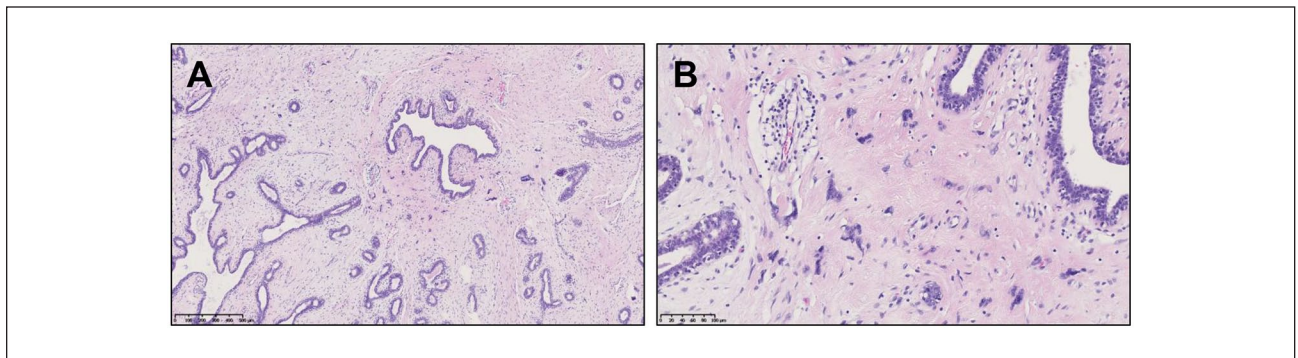
# Multinucleated Stromal Giant Cells in a Benign Fibroadenoma: Do Not Make a Mountain Out of a Molehill!

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**Figure 1.** Benign fibroadenoma of a 19-year-old woman, showing a focally increased stromal cellularity (A, original magnification 40×), with visualization of multiple bizarre multinucleated stromal giant cells at high magnification (B, original magnification 400×).



**Figure 2.** Benign fibroadenoma of a 22-year-old woman, showing a focally increased stromal cellularity (A, original magnification 50×), with visualization of multiple bizarre multinucleated stromal giant cells at high magnification (B, original magnification 200×).

The law of series is a phenomenon that pathologists frequently come across. It represents the observation that a rare diagnosis, once encountered, has the mysterious tendency of occurring again within a short time frame.<sup>1</sup>

We were faced with the law of series after observing bizarre multinucleated stromal giant cells in a fibroadenoma of a 19-year-old woman. Although a previous biopsy indicated a benign fibroepithelial lesion, the breast mass was excised because of its rapid enlargement. Macroscopic examination was inconspicuous and revealed a well-circumscribed round nodule measuring 42 mm.

The microscopic evaluation showed a fibroepithelial lesion lacking leaf-like architecture and harboring a loosely arranged stroma with low cellularity and diffuse

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myxoid changes. Overall, the stromal fibroblasts did not show mitotic activity nor cytonuclear atypia. At low magnification, a bizarre aspect with focally increased cellularity of the stroma was noted in a single tissue slide (Figure 1A). High magnification revealed the presence of bizarre multinucleated stromal giant cells (Figure 1B).

Although rare, we identified a second fibroadenoma containing multinucleated stromal giant cells within 2 weeks of diagnosing the first case. The second patient was a 22-year-old woman, also presenting with a palpable breast mass with rapid enlargement. Similarly to the first case, the second fibroadenoma harbored a single focus of bizarre multinucleated giant cells within an overall hypocellular stroma (Figure 2). Increased mitotic activity, cytonuclear atypia, stromal overgrowth, and leaf-like architecture were all absent.

Similar to the anxiety of these patients caused by a palpable breast mass with sudden onset and/or rapid enlargement, the presence of bizarre stromal giant cells may render the pathologist anxious. However, there is no need to make a mountain out of a molehill: bizarre multinuclear stromal giant cells have nothing to do with granulomatous inflammation and are not a sign of stromal cytonuclear atypia. They should be considered as a benign degenerative phenomenon.<sup>2</sup> In the absence of stromal hypercellularity, increased stromal mitotic activity, and a leaf-like architecture, the fibroepithelial lesion qualifies as a fibroadenoma.<sup>2-5</sup> Awareness of this entity is important to prevent a potential misdiagnosis as a phyllodes tumor.<sup>2-5</sup> We surmise that the presence of stromal giant cells in a core needle biopsy can be particularly challenging, since these biopsy specimens generally hamper the evaluation of the overall architectural pattern of a fibroepithelial lesion.<sup>2</sup>

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## References

1. Downarowicz T, Lacroix Y. The law of series. *Ergod Th Dynam Sys.* 2011;31: 351-367. [http://lacroix.univ-tln.fr/Publis\\_files/ETDS-2011.pdf](http://lacroix.univ-tln.fr/Publis_files/ETDS-2011.pdf). Accessed March 3, 2020.
2. Wawire J, Singh K, Steinhoff MM. Fibroadenoma with pleomorphic stromal giant cells: it's not as bad as it looks! *Int J Surg Pathol.* 2017;25:425-427.
3. Ryska A, Reynolds C, Keeney GL. Benign tumours of the breast with multinucleated stromal giant cells: immunohistochemical analysis of six cases and review of the literature. *Virchows Arch.* 2001;439:768-775.
4. Heneghan HM, Martin ST, Casey M, Tobbia I, Benani F, Barry KM. A diagnostic dilemma in breast pathology—benign fibroadenoma with multinucleated stromal giant cells. *Diagn Pathol.* 2008;3:33.
5. Huo L, Gilcrease MZ. Fibroepithelial lesions of the breast with pleomorphic stromal giant cells: a clinicopathologic study of 4 cases and review of the literature. *Ann Diagn Pathol.* 2009;13:226-232.