## Detection of bacteria by FISH in culture-negative soft tissue filler lesions

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**Background.** Adverse reactions to polyacrylamide gel are seen as swellings or nodules, and controversy exists whether these are due to bacterial infection or an autoimmune reaction to the filler.

**Objective.** Biopsies from culture-negative long-lasting nodules following injection with different types of polyacrylamide gel were examined with Gram stain and fluorescence in situ hybridization.

**Results.** Bacteria were detected in biopsies from 7 of 8 patients. They inhabited both gel and intervening tissue and tended to lie in aggregates.

**Conclusion.** The study supports the assumption that culturenegative

late adverse reactions to polyacrylamide gel are caused by infection with bacteria in aggregates, suggesting a biofilm environment.





