

FROM THE FAMILY PRACTICE INQUIRIES NETWORK

# Is there any benefit to Papanicolaou (Pap) test screening in women who have had a hysterectomy for benign disease?

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## ■ EVIDENCE-BASED ANSWER

The primary motivation to screen asymptomatic women after a hysterectomy is to prevent morbidity and mortality from gynecologic cancer. However, primary vaginal cancer is rare, the vaginal Pap test is not particularly accurate, and the natural history of precancerous vaginal lesions is uncertain. Based on these facts there is no compelling reason to screen women after hysterectomy for benign disease with routine Pap tests. (Grade of Recommendation: B, based on moderate quality cohort studies.)

## ■ RECOMMENDATIONS FROM OTHERS

Organization United States Preventative Services Taskforce <sup>1</sup>	Recommendation No benefit to screening
American Cancer Society	Regular Pap Tests
American College of Obstetrics and Gynecology <sup>3</sup>	Periodic screening
American Academy of Family Practice <sup>4</sup>	Not recommended

## ■ EVIDENCE SUMMARY

Vaginal cuff screening is common. Of women with a hysterectomy attending teaching hospital clinics in San Francisco,<sup>5</sup> 51% had a Pap test in the previous 3 years. In a Wisconsin survey,<sup>6</sup> 55% of women with a hysterectomy had a Pap test in the previous 3 years. The annual risk of vaginal cancer is low (0.7 cases per 100,000 women). It is estimated that approximately 250 women will die of vaginal cancer annually in the United States.<sup>7</sup> As with cervical disease, the rationale for vaginal cuff tests is to detect precancerous changes before cancer develops. Vaginal intraepithelial neoplasia (VAIN) is graded from VAIN 1 for a low-grade lesion to VAIN 3, which includes carcinoma-in-situ and highly dysplastic lesions. The natural history of VAIN is not well delineated. Although VAIN may be a common precursor to vaginal cancer, it will also resolve without treatment. In one study,<sup>8</sup> 23 women with VAIN were followed from 3 to 15 years. While the diseases of 2 women progressed (9%), the overall regression rate was 78%.

The accuracy of the Pap test for detecting VAIN has not been well documented. The estimated sensitivity of the Pap test is 50%<sup>9</sup> to 83%.<sup>10</sup> Feters and colleagues<sup>7</sup> estimated that the positive predictive value of an abnormal vaginal Pap test result was 0.05%; only 1 in 2000 women with abnormal test results would have cancer.

In the largest cohort study,<sup>11</sup> 9610 vaginal cuff Pap tests from 5682 women who had had a hysterectomy for benign disease were reviewed. The authors found 104 test results (from 79 women) were abnormal. Of these, 52 showed atypical squamous cells of undetermined significance, 44 were low-grade squamous intraepithelial lesions, 6 were high-grade squamous intraepithelial lesions, and 2 were read as carcinoma. Of the 79 women 27 were referred for colposcopy. Colposcopy results showed that 19 had normal mucosa, and 8 had VAIN 1 or 2. Six of these cases resolved without further treatment. Two were lost to follow-up, and no cancers were diagnosed. One of the women with a Pap-based diagnosis of cancer was lost to follow-up; the other had VAIN 1. No confirmed cases of carcinoma were found. The positive predictive value (the probability that an abnormal test result meant the patient had cancer) was 0% (95% confidence interval, 0.0%-33.0%).

There are multiple suggested treatments for VAIN, all based on case series. No randomized controlled trials were found comparing any of these treatments either to each other or to watchful waiting.

In summary, the overall risk of mortality and morbidity due to primary vaginal cancer is low. The natural history of the purported precursor lesion (VAIN) is not well understood, and it can regress without treatment. There are no trials showing that treatments of VAIN are more effective than placebo. The Pap test of the vaginal cuff is almost certain to miss some abnormalities. In addition, the extremely low prevalence means that almost all abnormal test results will be false positives. Given these data, it is unlikely that Pap test screening for vaginal cancer is clinically effective, and it is almost certain to be cost-prohibitive.

### **Clinical Commentary**

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As with most (if not all) evidence-based recommendations, this summary must be used in the context of individual provider-patient decisions. I will use this information to assist my patients in making informed decisions. Those patients who insist on having a Pap test may be interested to know that more than 90% of the positive Pap results will be false positives.

It is important to emphasize that these findings apply to women who have had a hysterectomy for benign indications. For those women with a history of cancer or for those with an unclear history, I think Pap test screening should be advised.

### REFERENCES

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