

## Personal Perspectives on Collecting Papanicolaou Smears

### or How I Learned to Use the Stirrups

Peter Curtis, MD

Chapel Hill, North Carolina

Fifteen years ago, after working as a general practitioner in England, I left for the United States to join a university department of family medicine. I quickly learned that there were many differences in practice style between the two countries. Some differences were organizational, such as the American routine of using the telephone to manage illness and prescribe drugs, while others were clinical and involved very different approaches to examining patients and ordering laboratory tests.

Recently, I became intrigued by the differences between physicians in the two countries concerning the process of taking a Papanicolaou smear. Taking a Papanicolaou smear consists of two straightforward activities: (1) visualizing the cervix and the vaginal walls, and (2) sampling the endocervix, ectocervix, and any suspect area. During my years of practice in Britain, I used a traditional leather-covered examination couch with a movable backrest made by the local carpenter. I took the smear with the woman lying on her back, feet together, in the "frog-leg" position with the bivalve speculum inserted, handle uppermost. A light was directed from the foot of the couch while I bent over the side and leaned across the woman's externally rotated legs, twisting my head sideways to perform the smear. I rarely had a chaperone or a nurse to assist me, either in getting the patient ready or in collecting the smear. This technique is still widely practiced in Britain.

Here in the United States, I have to use the more sophisticated (and expensive) examination table, which not only has multiple drawers, electric sockets, a roller for disposable paper sheets, and a sliding step to help the patient get up and down, but also shiny metal stirrups that pull out of the end of the table to hold up the

woman's feet. The "stirrups position" gives the physician, who sits on a stool next to the end of the table, an excellent view of the perineum but makes for rather muffled conversation because of the privacy sheet that is laid across the woman's knees, hiding the physician's movements. I always believed that this was a classic case of unnecessarily sophisticated equipment designed as a marketing tool to impress private patients, and that a simple couch would do perfectly well, but I usually kept those thoughts to myself. For 14 years in this country, I continued the habit of using the British frog-leg technique and found it to be popular among some patients who said that the position was more comfortable and less "demeaning" than the stirrups, and it provided better eye contact with their physician, making it easier to talk.

In 1986, our practice, made up of 11 part-time clinician/teachers and 18 residents, evaluated the performance of Papanicolaou smears taken over a 6-month period as a quality assurance activity. The percentage of my patients from whom I obtained an adequate smear (defined by the presence of endocervical cells and adequate slide preparation) was 70% using the moistened swab and spatula collection technique. My colleagues' adequacy rates ranged from 73% to 90%, so I felt reassured that my technique was nearly as good as theirs and certainly more pleasant for the patients. I did not think there was much reason to change the way I did things.

In 1988 I helped to design an automated quality assurance system for normal and abnormal Papanicolaou smears. Around this time, a number of articles appeared on the problem of low adequacy rates of Papanicolaou smears performed by family physicians, gynecologists, and nurse practitioners. These low rates were improved by a new sampling device, the cytobrush.<sup>1-4</sup> A year later, because of its superior effectiveness in collecting cellular elements, we switched to the new cytobrush as a sampling method. After another 6 months we began to give feedback to the physicians on their Papanicolaou smear

Submitted July 11, 1991.

From the Department of Family Medicine, University of North Carolina, Chapel Hill. Requests for reprints should be addressed to Peter Curtis, MD, Department of Family Medicine, CB #7595, School of Medicine, University of North Carolina, Chapel Hill, NC 27599-7595.

Table 1. Percentage of Adequate\* Papanicolaou Smears

Year	Author	Colleagues
1986	73	80
<i>Cytobrush introduced</i>		
1989	74	86
<i>Physician feedback started</i>		
1990	72	91
<i>Stirrup position adopted by author</i>		
1991	94.5	90

\*Adequacy defined by slide preparation and sampling criteria.

adequacy rates. When I saw my own data, it was obvious that my performance was quite a bit lower than that of my colleagues, whose rates had improved steadily (Table 1). In fact, by mid-1990, my rates were worse than in 1986 and, even more important, every one of the inadequate smears showed an absence of endocervical cells. Since I, like everyone else, was using the cytobrush, I came to the inevitable conclusion that my collection technique must be faulty. Obviously, I was not sampling the cervix correctly, particularly in those women who were postmenopausal and had endocervices that were difficult to reach.

I decided, with some reluctance, to switch from the "English saddle" to the "American stirrup," as it were, and over a period of 3 months found that my adequacy rates improved and have remained close to 90%. On reflection, I realize that I had not been able to pinpoint the cervix accurately enough using the frog-leg position, and it was feedback on my performance and comparison with colleagues that jolted me into changing a well-worn habit.

I have now committed myself to using the stirrups and to explaining to my patients why our old, comfortable, more pleasant ways must be abandoned. For the past 5 years the cytology literature has leaned toward the opinion that endocervical and metaplastic cells are important markers for the adequacy of screening cervical smear, so I was pleased that my improved technique would detect abnormalities that might have been missed before. Now the literature is beginning to lean the other way, telling us that endocervical or metaplastic cells may not be necessary markers for optimal detection of abnormalities.<sup>5</sup> Furthermore, it seems the Papanicolaou test is not very good at picking up the nasty effect of human papillomavirus, and what we need to do is colposcopy followed by destruction of the offending tissue.<sup>6</sup> On the other hand, many of these lesions regress or disappear, so we could be overtreating our patients and starting them on an iatrogenic cascade.<sup>7</sup> To make matters worse (or better), the epidemiologists tell us that invasive cervical cancer is not very common anyway, and that the probability of getting it is reduced by 85% if a woman has two

normal Papanicolaou smears in her lifetime.<sup>8</sup> Yet again, there are anecdotal rumors of a new type of fast-growing cervical cancer in younger women.<sup>9</sup> Finally, we all know that the women who really are likely to get cervical cancer are those who do not have access to health care or cannot afford to get Papanicolaou smears anyway.

It has taken some time for me to complete telling all my patients that I can get a more effective Papanicolaou smear by having them place their legs in stirrups, but this task has been overtaken somewhat by all of this other complicated information. Somehow I must convey to them, in a straightforward way, the subject of sensitivity and specificity of the test, together with the current confusions and controversies concerning proper assessment and management of abnormal findings.<sup>10</sup> Has a stage been reached when the following telephone conversation between myself and a patient will take place?

"Well, Mrs X, I have to tell you that your Pap smear shows a slight abnormality . . . No, it is not cancer . . . well, we are not quite sure what it means or what should really be done about it. . . . It might be caused by a virus that is sexually transmitted and may well be a cause of cancer. . . . Can it get better on its own? Well, yes, it can. Treatment? Yes, we can treat it with cold surgery. . . . Maybe you'd better come in for a 30-minute appointment so that I can try and explain it all to you."

Once regarded as the most effective and straightforward screening test for cancer, the Papanicolaou smear has become quite controversial. In Britain, resources are increasingly committed to careful follow-up of abnormal findings and a reduction in frequency of routine tests (every 3 to 5 years), whereas in the United States, those who can afford it have annually not only the Papanicolaou test but also tests for human papillomavirus. Since invasive cervical cancer is quite rare, vast numbers of subjects (and dollars) would be needed to demonstrate significant differences in screening approaches that would guide clinicians in their practice. Primary care physicians, therefore, are left with conflicting data that are not particularly helpful in advising their patients on the meaning of the results of Papanicolaou tests or on how often they should be monitored. Life seems to be getting more complicated all the time.

## References

1. Elias A, Linthorst G, Bekker B, Vooijs PG. The significance of endocervical cells in the diagnosis of cervical epithelial changes. *Acta Cytol* 1985; 29:323-8.
2. Kivlahan C, Ingram E. Improved yield of endocervical cells on Papanicolaou smears in a residency setting. *J Fam Pract* 1985; 20:381-5.
3. Kivlahan C, Ingram E. Papanicolaou smear without endocervical cells. Are they inadequate? *Acta Cytol* 1986; 30:258-60.