evaluations of screening will ultimately need to be based on a combination of trial data and decision modeling. Perhaps the best we can expect is to have the real effect of an early detection strategy demonstrated under a few well-specified conditions and then make careful inferences about how changing conditions (e.g., target population, screening frequency, new tests) will affect net benefit.

At first glance, there is every reason to believe that early detection should work. If people are examined carefully enough by using advanced laboratory or imaging technologies, then most disease ought to be “caught” at an early stage. It also stands to reason that disease found earlier will be easier to treat. Consequently, much of the mortality and morbidity of advanced disease should be preventable. The idea of early detection is so appealing that there has been a dramatic growth in the use of diagnostic tests—as part of systematic efforts (the Appendix Table provides the current cancer screening recommendations of the U.S. Preventive Services Task Force and the American Cancer Society) or as more routine testing in general (witness the finding, also in this issue, that one quarter of the elderly in Miami undergo echocardiography each year).

But there are downsides to early detection. First, many people must be involved but only a few can benefit. To encourage people to be screened, proponents must articulate a message that motivates people to do so (exemplified by the “1-in-9” statistic for breast cancer). Too often this persuasion involves overstating the risk for the target disorder and exaggerating the potential benefits. In the following figure (representing 12 patients), 2 of 6 rapidly progressive cases are detected, whereas 4 of 6 slowly progressive case are detected.