In practice, the choice of endpoints is, of course, dependent on the nature of the disease or condition to be treated. Objective endpoints such as radiological measures (X-rays, CT scans), physiological measurements (e.g., blood pressure, heart rate, lung capacity), and blood measurements (e.g., cholesterol concentration, white blood cell count) are especially useful when it is not possible to run a blinded study (i.e., the subjects and possibly the researchers do not know who is receiving the therapy). Subjective endpoints, such as pain sensation, mood modification, or other quality of life assessments can also serve as clinical trial endpoints, but they are less effective in non-blinded studies, as the subjects themselves may impact the results. A clinical trial for a new treatment for chronic pain, for example, could be significantly impacted if the patients knew that they were receiving the test compound and not a placebo. They might believe that they feel less pain as a result of the new therapy, irrespective of the actual utility of the candidate compound. In general, subjective measurements tend to add variability to study results that can mask the true results of a clinical trial. As a result, objective endpoints are preferred when possible.

In considering the overall design of a phase III clinical trial, it is important to establish whether or not all of the subjects of the trial will receive the test therapy. The simplest phase III clinical trial design is a parallel group trial in which each patient group receives only one treatment regimen (Figure 9.17). Patient management is simplified in this trial

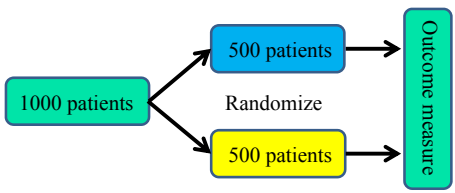

FIGURE 9.17 In a randomized, parallel group phase III clinical trial, patients receive only one treatment regimen. Multiple treatment groups can be established to incorporate placebo controls, standard of care controls, and multiple dose levels.

design, and it is possible run multiple treatment groups in parallel to the standard of care (or placebo). A crossover trial design can be a useful alternative (Figure 9.18). In this instance, the subjects of the trial are split

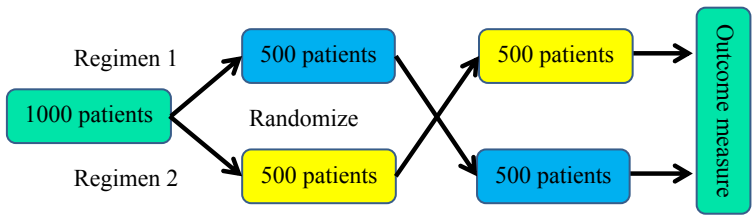

FIGURE 9.18 In a randomized, crossover phase III trial, the patients are divided into groups and assigned treatment regimens. After a set period of time, dosing regimens are switched, and the trial continues.