



FIGURE 98e-1 Decision-making for the implementation of specialized nutritional support (SNS). CVC, central venous catheter; PICC, peripherally inserted central catheter. (Adapted from the chapter on this topic in *Harrison's Principles of Internal Medicine, 16e*, by Lyn Howard, MD.)

effects of the SRI accelerate skeletal muscle wasting and substantially block normal protein-sparing adaptation to protein and energy starvation.

Inactivity A nutritional red flag should be raised over every acutely ill patient who remains bedridden or inactive for a prolonged period. Such patients commonly manifest muscle atrophy (due to nutritional deficiencies and disuse) and anorexia with inadequate voluntary food intake.

Once it has been determined that a patient has significant—and, in particular, *progressive*—PEM despite meaningful efforts to reverse it by modifying the diet or the way food is provided, the next step is to decide whether SNS will have a net positive effect on the patient's clinical outcome. The pathway to the end stage of most severe chronic diseases leads through PEM. In most patients with end-stage untreatable cancer or certain end-organ diseases, SNS will neither reverse PEM nor improve the quality of life. Provision of food and water is commonly regarded as an aspect of basic humane care; in contrast, enteral and parenteral SNS is a therapeutic intervention that can cause discomfort and pose risks. As with other

life-support interventions, the discontinuation of enteral or parenteral SNS can be psychologically difficult for patients, their families, and their caregivers. Indeed, the difficulty can be greater with SNS than with other life-support interventions because the provision of food and water is often considered equivalent to comfort care. In such difficult, near end-of-life situations, it is prudent to explicitly state the treatment goals at the outset of a course of SNS therapy. Such clarity can smooth the way for subsequent appropriate discontinuation in those patients whose prognosis has become hopeless.

After the decision has been made that SNS is indeed appropriate, the next determinations are the route of delivery (enteral versus parenteral), timing, and calculation of the patient's nutritional goals. Although enteral SNS is the default option, the choice of optimal route depends on the degree of gut function as well as on available technical resources.

Both the choice of route and the timing of SNS require an evaluation of the patient's current nutritional status, the presence and extent of the SRI, and the anticipated clinical course. Severe SRI is identified on the basis of the standard clinical signs of leukocytosis, tachycardia, tachypnea, and temperature elevation or depression.