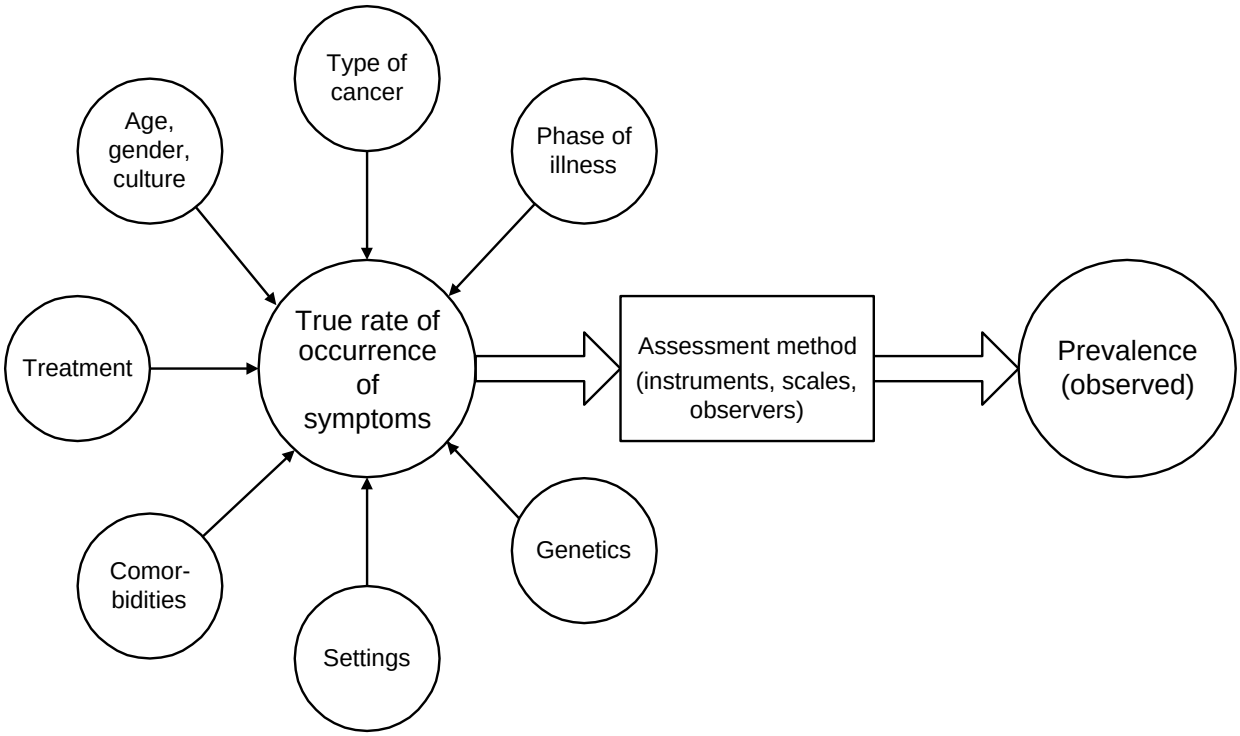

Figure 1. Relationship between some factors that contribute to the occurrence of cancer symptoms, methods of assessment, and prevalence of symptoms.

Dramatic progress in pain research has resulted from extensive laboratory investigations leading to increasingly detailed models of the fundamental mechanisms of pain. These advances in the understanding of the physiology of pain have led to clinically testable hypotheses regarding pain mechanisms and new treatments. There is, unfortunately, little fundamental research on depression in cancer. Its mechanisms may differ from non-cancer-related depression, but it is reasonable to assume that there is overlap and therefore a rationale for testing interventions found effective outside the context of cancer. Mechanisms of cancer-related fatigue remain generally unexplored despite its prevalence and impact. The dearth of information of the pathophysiology of cancer-related fatigue is reflected in the paucity of treatment trials for this condition.

The studies reviewed in this report provide evidence of progress in a number of other areas of symptom research. Large-scale, population-based studies of symptoms in cancer have been performed, providing estimates of symptom prevalence that are more generalizable than those obtained from small cohort studies. Some of the practical difficulties of accruing and retaining research subjects, who are depressed, fatigued, or in pain, have begun to be addressed. An impressive amount of data has been accumulated and some important insights have been gained about pain, depression, and fatigue in cancer. Using sophisticated assessment tools, investigators have measured the burden of pain, depression, and fatigue, and the factors that correlate with them, in a wide variety of settings: during curative or palliative treatments, in long-term survivors, and near the end of life. Some randomized controlled trials have led to the adoption of new treatments to relieve symptoms and ameliorate suffering. Given the scope and complexity of the problems, much remains to be done.