

The access to cancer diagnostics and cancer treatment is not the same for all types of cancer patients. Furthermore, the resources involved in these processes are costly and scarce. Long access and waiting times to diagnostics and treatment can cause increased anxiety of patients.

The goal of this thesis is to improve the quality and efficiency of (multi-disciplinary) cancer care processes. We develop new planning and control approaches to optimize the organization of multiple shared resources involved, so that employees experience a leveled workload, and access to diagnostics and treatment is equally divided over and optimized for all patient types. To develop these approaches we use Operations Management/Operations Research techniques. Furthermore, we apply the outcomes through case studies in UMC Utrecht (NL) and Mayo Clinic (USA), and analyze the critical success factors for making an impact in practice.