Penile cancer is one of the least common malignancies within the urological field, with approximately 150 men diagnosed in Sweden each year. As a consequence of the low incidence, there are no randomised controlled trials or Cochrane reviews, and guidelines are based on insufficient evidence.

This thesis focuses primarily on prognostic factors in penile cancer. The first study strengthens human papillomavirus (HPV) as an aetiological agent. Furthermore, a substantial subset of penile tumours are likely preventable by available vaccines. No prognostic value of HPV status was found.

In the second study, subgroups of patients (depending on the management provided) with an increased risk of recurrences were identified. Patients undergoing organ-preserving treatment were found to have an increased risk of local recurrences, and patients with lymph node metastases or those who were not staged for lymph node involvement had an increased risk of regional recurrences. Local recurrences had minor, while regional recurrences had major, impact on survival.

In the third study, dynamic sentinel node biopsy was assessed concerning sensitivity in predicting lymph node involvement. The sensitivity was suboptimal. However, the study provides insight regarding the introduction of the technique and an assumed learning curve.

In the last study, patients diagnosed with penile cancer in Sweden between 2000 and 2012 were analysed. The incidence of penile cancer remained stable, and most patients were diagnosed with early-stage localised disease. Adherence to guidelines was low. Older age, increasing grade, tumour stage, and lymph node stage were associated with poorer survival.