The SIRS trial, led by Brett Miles, DDS, MD, is a prospective trial for patients with low tobacco exposure and low or intermediate risk HPV or oropharyngeal carcinoma. Functionally operable patients with HPV oropharynx cancers underwent a surgical resection and then were assigned to treatment groups based on the findings from their surgical specimens. Three cohorts based on surgical staging were treated post-operatively. One cohort did not receive any radiation, a second cohort received a reduced dosed of postoperative radiation for mild negative prognostic findings and a third cohort received a combination of reduced dose radiation and chemotherapy with cisplatin for more serious poor prognostic findings. More than 50 patients were enrolled on the trial and completed all treatment per protocol. There were four recurrences among this group, all of whom received subsequent salvage curative treatment. One additional patient died of a non-cancer cause and all of the remaining patients were alive without evidence of disease. The cancer specific survival is 100 percent and the overall survival was greater than 97 percent. Ninety-two percent of patients remained completely disease free and all those patients had reduced dose radiation with subsequent improvement in their quality of life. The four recurrences were successfully treated and remain disease free. This study sets a new standard of care for patients with early intermediate stage HPV oropharynx cancer.

The Quarterback 1 trial is a multidisciplinary phase 2 trial of induction chemotherapy followed by a randomization to standard dose or reduced dose chemo radiotherapy for patients with HPV positive disease. These patients had advanced cancers with high risk for distant metastases and/or local regional failure. With a minimum follow-up of four and a half years and average follow-up of six years, the overall survival is indistinguishable between the two arms and is 87 percent and 82 percent in the standard dose and reduced dose radiation arms respectively. All recurrences were in the first four months of follow-up after treatment. Two of the three failures occurred in patients who had non-HPV16 types as the cause of their cancers. This study demonstrated that reduced dose radiation after induction chemotherapy is equally effective in patients with a high risk of recurrence with HPV positive disease and cautions that there may be differences in the effectiveness of therapy between HPV16 and non-HPV16 types. Quality of life data showed a significant improvement in quality of life in the first year for patients on the reduced dose treatment. An extension trial known as Quarterback 2 has been completed and will be reported soon. Reduced dose chemo radiotherapy after induction treatment was effective and significantly improved quality of life for these patients.