



## **Human Papillomavirus (HPV) Advances; A Patient Education Program**

### **Benefits of Induction Chemotherapy**

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This is a study, that is one of several, asking whether chemotherapy given before surgery could potentially obviate the need for any adjuvant manoeuvre, any adjuvant radiation out back. This wasn't listed to HPV-positive patients, but the bulk of the patients accrued here were fairings, most of them being HPV-positive, and of course the other patients were higher risk. At left you see the waterfall-plot for this study. So a waterfall-plot, every patient is a bar. Anything north of the zero, there are none here, is percentage growth. Anything south of the zero is the percent shrinkage on scans. For those who live in North Carolina or follow North Carolina sports, there is a joke hidden in the colour coding here; which is that those patients whose cancer was eliminated by the chemotherapy regiment, meaning the surgical pathology report had no viable cancer, are coded in Carolina Blue. Those who did not have a pathology-complete response are coded here in Duke Blue. And a few things are interesting here. The clinical response rate is high. The pathologic response rate was unexpectedly high, and actually they correlated poorly with each other. The curves at top right for progression-free survival and overall survival are delightfully boring for the statistician; which is to say none, at the time of this this report I think there was one since that was reported in a later report on this. But still, very very good outcomes. And then, the bottom shows you the flow of patients, which I won't walk through but it's to say that most patients were able to avoid the adjuvant radiation, and still, as shown, outcomes were preserved. Now, I designed and ran this study, and I regret the choice of drugs in there, at the time is was designed, the third drug in here, it was Carboplatin Paclitaxel Lapatinib. We now no longer believe lapatinib to be active, it's diarrhoea-inducing placebo. But this study I show you to support ongoing efforts by others to use induction chemotherapy to eliminate the need for adjuvant therapy at all. And of course, between all of these approaches, which is to say reducing the radiation dose when using radiation upfront may be reducing the chemo dose in select patients. Using surgery and reducing the radiation dose, we will need randomised trials to answer which of these are the best for which patients, and, of course, to compare them to standard of care.