

## LATE-BREAKER

### Short-Term Endocrine Therapy Prior To And During Radiation Therapy Improves Overall Survival In Patients With T1b-T2b Adenocarcinoma Of The Prostate And Psa ≤20: Initial Results Of Rtog 94-08

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**Purpose/Objectives:** To test if short-term endocrine therapy prior to and during radiation therapy will improve overall survival in patients with good prognosis, locally confined, adenocarcinoma of the prostate. **Materials/Methods:** Patients with biopsy-proven T1b-T2b prostate cancer and PSA ≤20 were randomized to radiation therapy alone (RT) or to radiation and four months of total androgen suppression (H+RT) starting two months prior to RT, consisting of flutamide 250 mg PO tid with either monthly goserelin 3.6 mg SQ or leuprolide 7.5 mg IM. 46.8 Gy were delivered to the regional lymphatics followed by a 19.8 Gy prostate boost to 66.6 Gy. If surgical stage N0 or Gleason Score (G.S.) ≤5 with PSA ≤10, 68.4 Gy were delivered to the prostate only. All doses were prescribed to isocenter. Patients were to have prostate biopsies two years after completion of radiation. The primary endpoint was overall survival. Secondary endpoints included disease-free survival, local progression, distant metastases, biochemical failure, clinical relapse, second biochemical failure and disease-specific survival. **Results:** From October 1994 to April 2001, 2028 patients were enrolled. 1979 eligible patients were randomized to H+RT (n=987) or RT (n=992). Pretreatment characteristics were balanced. Median age was 71 years. 964 patients (49%) had T1 tumors, 1015 (51%) had T2. 209 patients (11%) had PSA <4, 1770 (89%) had PSA 4-20. The G.S. was 2-6 in 1215 patients (61%), 7 in 538 (27%), 8-10 in 180 (9%) and unknown in 46 (2%). 1501 patients (76%) were white, 395 (20%) were black and 83 (4%) were of other race. Median follow up time of all eligible patients was 8.4 years in the H+RT arm and 8.1 years in the RT arm. Estimated overall survival at 12 years was 51% in the H+RT arm and 46% in the RT arm. (p=0.03) Negative prognostic factors by Cox regression analysis included older age, G.S. ≥7 and non-white race. Re-biopsy was done in 439 of 987 patients in the H+RT arm; 344 (78%) of these were negative. In the RT arm, 404 of 992 patients had re-biopsy; 241 (60%) were negative. Acute radiation toxicity was similar in both arms (4%-5% Grade III, 1% Grade IV) as was late radiation toxicity (10%-13% Grade III, 1%-3%

Grade IV, <1% Grade V). Hormonal toxicity was mainly liver and was Grade III in 4% and Grade IV in <1% of patients. Hormonal cardiovascular toxicity was Grade 1 in 12 patients (1%) and Grade 2 in one patient. **Conclusions:** The addition of only four months of total androgen suppression given prior to and during radiation therapy significantly improved overall survival in patients with T1b-T2b adenocarcinoma of the prostate with PSA  $\leq$ 20. Analysis of secondary endpoints and risk-stratified subsets continues and will help identify those patients most likely to benefit.

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