associated with being alive at last follow-up. Higher SBRT dose was associated with GR ($P = 0.03$). Pts with tBili < 2 and >2 had a mean liver dose (mLD) of 13.4 Gy [range 2.4-15.5], and 6.6 Gy [range 1.3-13.6], respectively.

**Conclusion:** Pts with elevated tBili (>2), INR and ascites at baseline are at risk for being a PR after SBRT. Multiple radiographic features (lack of pPat, pHTN, and ascites) and elevated tBili are associated with death < 207 days after SBRT. While higher dose was associated with GR, pts with good liver function tended to receive higher doses. Further study and longer follow-up is needed to stratify the dose-volume-liver function relationship to identify patients with poor liver function who may benefit from halting local progression with SBRT.

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#### 2454

**Outcome Analysis of Treatment in Stage IIA, T3N0 Rectal Adenocarcinoma in the Veterans Health Administration (VHA)**

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**Purpose/Objective(s):** Controversy exists regarding the benefit of combined modality therapy with chemotherapy (chemo) and radiation therapy (RT) as compared with surgery alone in patients with T3N0, IIA rectal adenocarcinoma (RA) with curative surgical resection alone or with adjuvant treatment and had treatment, pathologic and patient characteristic data available for analysis. Medical comorbidity data and carcinoblastic antigen (CEA) level were obtained from the VA Corporate Data Warehouse (CDW). Comprehensive pathologic characteristics, treatment strategy, and vital status were obtained from VACCR. Cox proportional hazards regression models were used to analyze the primary outcome of OS. Intra-rectal topical administration of epinephrine is effective in protecting rectum in patients with pelvic tumor undergoing RT, and does not influence blood pressure and heart rate during the period of epinephrine suspension ($P = 0.792$, $0.542$).

**Results:** A total of 4192 patients were available for analysis. Median patient age was 64 (30-90). Surgical margins were positive in a total of 41 (6.4%) of patients, margin status was negative in 561 (87.8%) of patients, and was missing in 37 (5.8%). A total of 27 (4.2%) patients were managed with surgery and chemo alone, 16 (2.5%) with surgery and RT alone, 452 (70.7%) with concurrent chemo-RT use versus surgery alone (1.95, $P < 0.001$), combined chemo-RT use (HR 0.46, 95% CI 0.32 - 0.66, $P < 0.001$), high tumor grade (HR 2.28, 95% CI 1.44 - 3.60, $P < 0.001$) and negative margin status (HR 0.55, 95% CI 0.34 - 0.91, $P = 0.02$) were independently associated with OS. The OS benefit of curation-RT use versus surgery alone was confirmed with a Cox model using the inverse probability of treatment weights ($HR = 0.55$, 95% CI 0.335 - 0.769, $P = 0.001$).

**Conclusion:** As compared with surgery alone, combined modality therapy with surgery and chemo-RT was associated with an improvement in OS for patients with stage IIA rectal adenocarcinoma. This was independent of medical comorbidities, tumor grade, and surgical margin status. In the absence of contraindications, these data support the use of combined modality therapy for patients with stage IIA adenocarcinoma of the rectum.

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#### 2455

**Endorectal Epinephrine Suspension May Protect Against Radiation Proctitis During Radiation Therapy for Pelvic Tumor**

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**Purpose/Objective(s):** To evaluate the radio-protective efficacy and safety of intra-rectal epinephrine suspension in radiation proctitis in patients receiving radiation therapy (RT) to the pelvis.

**Materials/Methods:** A total of 50 patients with pelvic carcinoma including prostate cancer, cervical cancer and endometrial carcinoma were randomized to receive epinephrine (n = 24) or sterile physiological saline (n = 26) as intra-rectal suspension before daily radiation therapy. Epinephrine (1:10000, 40ml) was administered intra-rectally for experimental group, and the equivalent volume saline as placebo for control group. All patients should evacuate rectum after irradiation. Toxicity was assessed at baseline, during treatment, and at follow-up visits by using RTOG toxicity scoring criteria.

**Results:** Median follow-up was 39 months (range, 33-44months) for both groups. Five weeks after the start of RT, the incidence of ≥ Grade 2 toxicity was 9.1% in epinephrine group compared with 26.9% in the saline group and was statistically significant ($P = 0.016$). The onset time of constrictic of rectal mucosa vessels was 5±0.8 minutes, the duration was 22.5±2.9 minutes. There were no significant change in blood pressure and heart rate within the period of epinephrine suspension ($P = 0.792$, $0.542$).

**Conclusion:** Intra-rectal topical administration of epinephrine is effective in protecting rectum in patients with pelvic tumor undergoing RT, and does not influence blood pressure and heart rate.

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#### 2456

**Texture-Based Classification of Different Single Liver Lesion Based on SPAIR T2W Magnetic Resonance Imaging Images**

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**Purpose/Objective(s):** The aim of this study was to assess the feasibility of texture analysis (TA) based on spectral attenuated inversion-recovery T2 weighted magnetic resonance imaging (SPAIR T2W-MRI) images for the