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# Admission Rates, Healthcare Utilization, and Economic Burden of Radiation Cystitis (RC) in the United States

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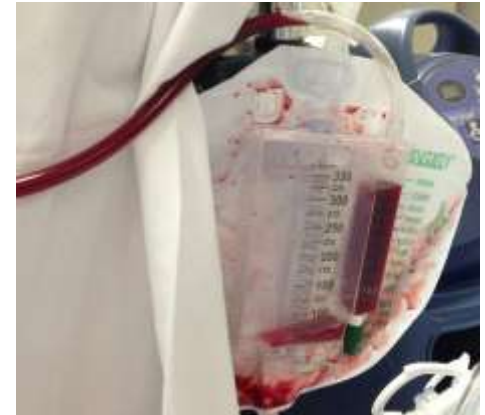


# **Admission rates, Healthcare utilization, and economic burden of radiation cystitis (RC) in the United States**

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# Introduction

- Radiation cystitis
  - Major cause of morbidity after radiotherapy for pelvic cancers.
  - might be a more frequent problem than previously thought,
    - Consisting of 1.4% of all elective admissions to a Urology;
    - Many patients never admitted to urology
    - Presentation beyond the follow up of clinical trials
    - actual prevalence not known.
  - No definitive cure
  - Repeated admission to inpatient care, often undergoing multiple urological procedures for management of hematuria.
  - Intractable cases may require morbid procedures like cystectomy!!
  - **Scanty funding for research**



# Admission rates, Healthcare utilization, and economic burden of radiation cystitis (RC) in the United States

## Methods

- Included: 21,157 records of adult patients with a diagnosis of RC within the NIS from 2003-2014.
- Excluded: Concurrent diagnosis of bladder cancer, CIS, or tuberculosis of bladder (n=1,422), leaving 19,613 records for analysis (population estimate 94,434 per NIS survey weights).



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Credit: [https://www.hcup-us.ahrq.gov/db/nation/nis/reports/NIS\\_2000\\_Design\\_Report.jsp](https://www.hcup-us.ahrq.gov/db/nation/nis/reports/NIS_2000_Design_Report.jsp)

# Admission rates, Healthcare utilization, and economic burden of radiation cystitis (RC) in the United States

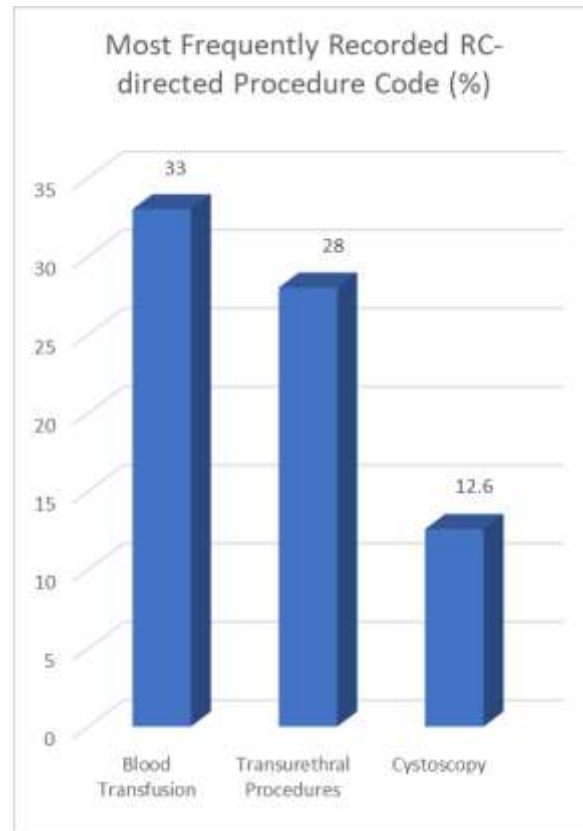
## Methods

- Outcomes studied:
  - Receipt of any inpatient procedure during admission,
  - number of inpatient procedures received (0, 1, 2, >2),
  - length of stay,
  - disposition of patient at discharge,
  - total inflation-adjusted total cost of admission, and
  - high total cost (upper quartile of inflation-adjusted cost).
- Cost for each admission and cumulative annual cost of RC-associated admissions were calculated for the study period.

# Admission rates, Healthcare utilization, and economic burden of radiation cystitis (RC) in the United States

## Results

- Median age **75.7 years**.
- The inflation-adjusted **cost per admission was 9207 US dollars** (IQR 5275 -17,573)
- 90% of the admissions were in hospitals located in urban areas.
- **61.2% patients received at least one inpatient procedure.** 43% of admissions recorded more than one RC-directed procedure code.
- Median **length of stay 4.5 days**
- The cumulative cost of inpatient treatment of radiation cystitis was 63.5 million US dollars per year, amounting to a total of 952.2 million over the study period.
- Radical cystectomy was done in 1.3% of the admissions.



## Conclusion

- Disease of the elderly
- RC associated admissions are costly. About 2/3<sup>rd</sup> of the patients require procedures, 43% requiring more than one procedure.
- Major economic burden to US healthcare.
- No definitive treatment available
- Funding implications.