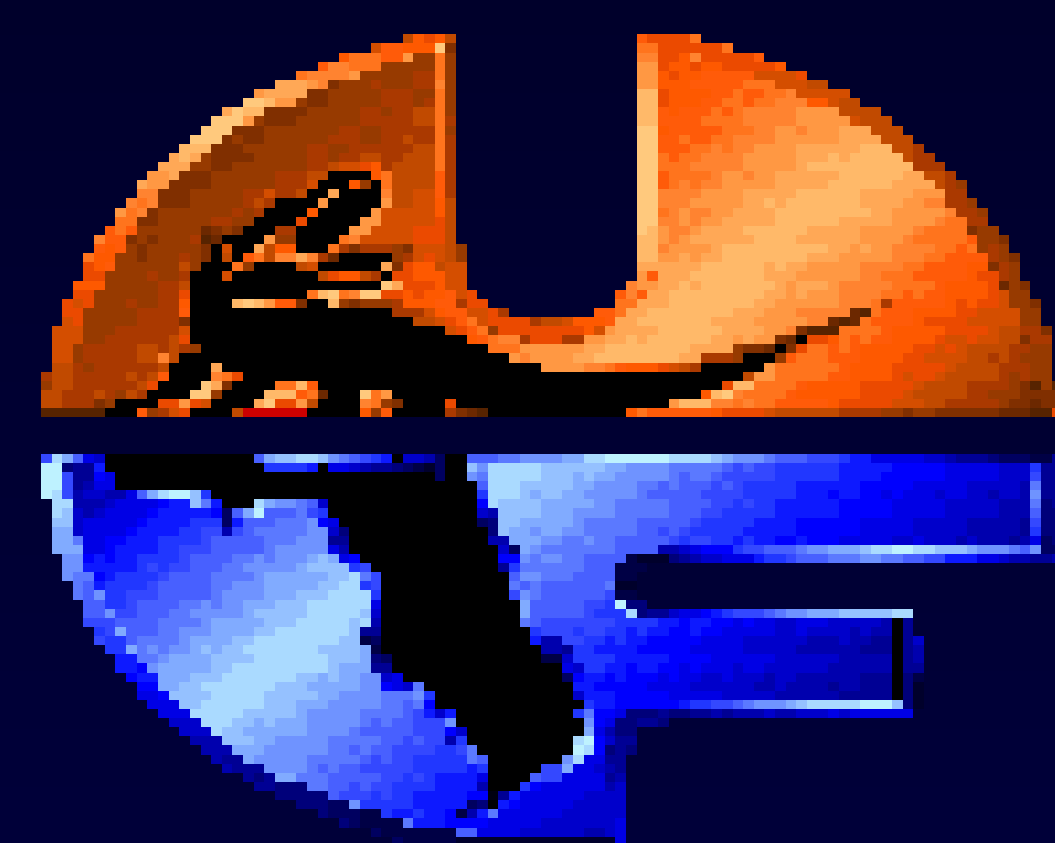


Outcome Following Radiotherapy for Stage IIIB and IVA Cervix Cancer

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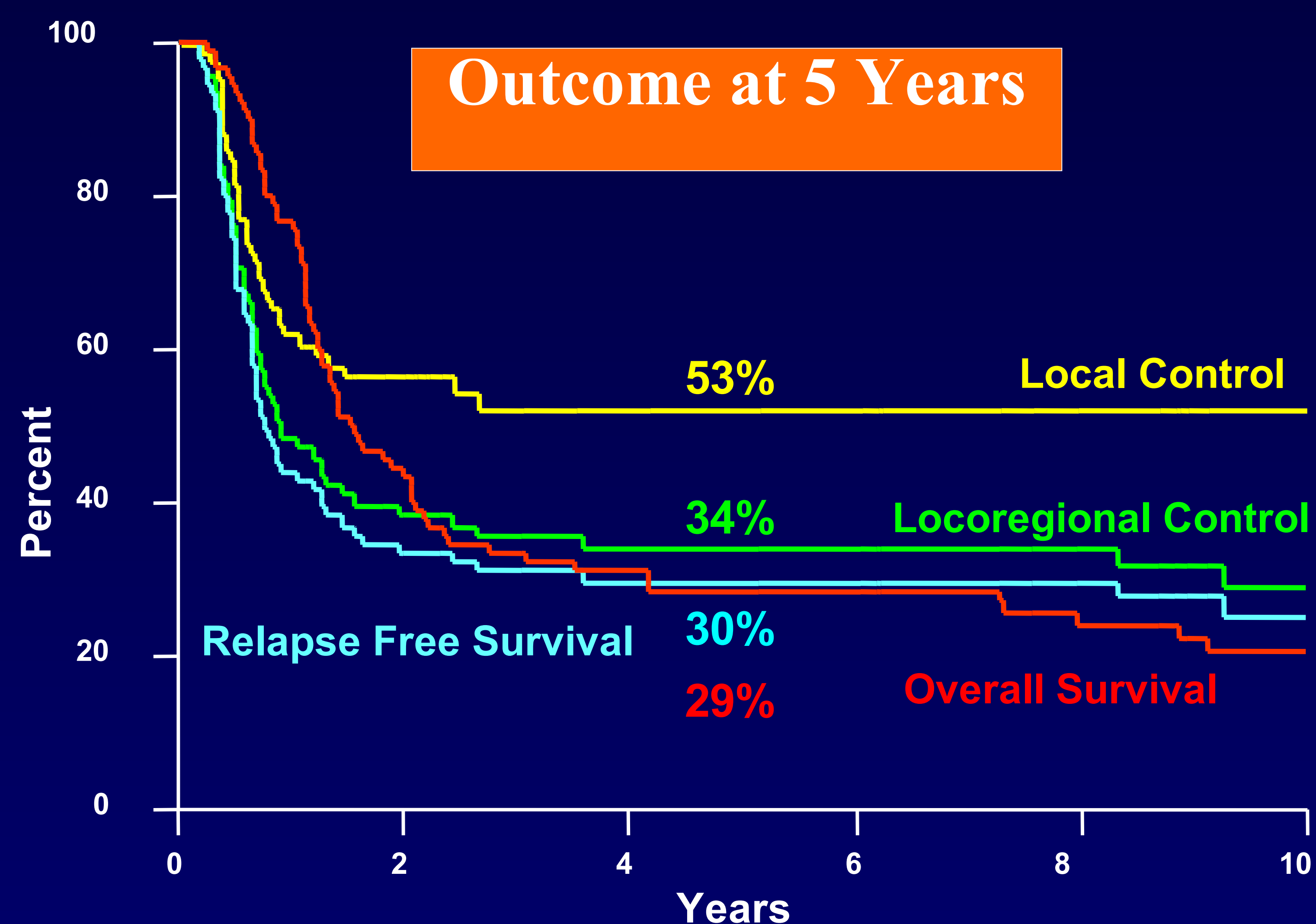


Introduction

Radiotherapy has been the mainstay of therapy for locally advanced carcinoma of the cervix for several decades. The literature reports survival rates of between 20% and 50% for these patients. The purpose of this review is to report the long term outcome of patients with stage IIIB and IVA carcinoma of the cervix treated at the University of Florida with radiotherapy over the past 25 years.

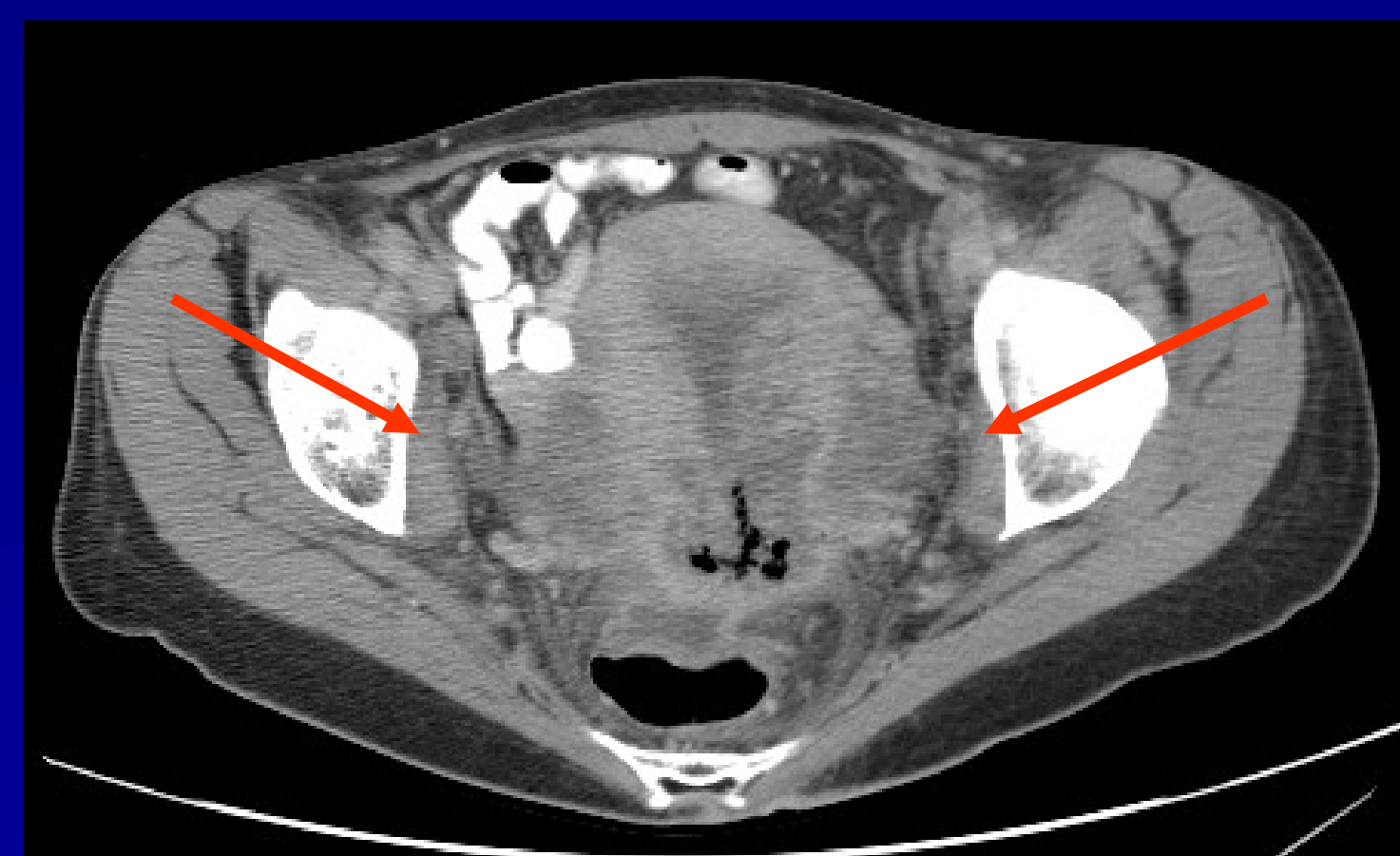
Materials and Methods

91 patients with stage IIIB (84 patients) or IVA (7 patients) carcinoma of the cervix were treated consecutively with radiotherapy with curative intent at the University of Florida between January 1980 and December 2003. All 91 patients were treated with a combination of external beam radiotherapy and brachytherapy. External beam radiotherapy was delivered to a median dose of 60 Gy (40 to 70.3 Gy) to the pelvis. Brachytherapy was low dose rate in all cases. Patients were treated with either one ~72 hour implant (68%) or two ~48 hour implants (32%). The implants were either interstitial or intracavitary, or a combination of the two, depending on patient anatomy. Thirty-three patients (36%) received at least one interstitial implant, either alone or in combination with an intracavitary implant. The median dose from the interstitial implants was 27.6 Gy to the periphery of the implant. The remaining 64% of patients received only intracavitary implants. The median dose from the intracavitary implants was 25.1 Gy to Point A. The median overall dose to Point A was 94.4 Gy (70 to 114 Gy). Cisplatin based chemotherapy was delivered to 13 patients (14%). The median follow-up for surviving patients was 8.8 years. Minimum follow-up was 2 years.



Patterns of Relapse

First Site of Relapse	% of Relapses 65 relapses in 91 pts
Local (+/- Regional +/- Distant)	60%
Pelvic Nodes (+/- PAN +/- Distant)	12%
Paraortic Nodes (+/- Distant)	17%
Distant Only	11%



Complications

Grade (RTOG)	Complications	Description
3	4/91 (4%)	<ul style="list-style-type: none"> Rectovaginal Fistula (1) Avascular necrosis of hip (1) Ureteral stricture (1) Vaginal Necrosis (1)
4	7/91 (8%)	<ul style="list-style-type: none"> Permanent colostomy (6) Path Fx of femoral head (1)
5	1/91 (1%)	<ul style="list-style-type: none"> Bowel necrosis & GI bleed
Total	12/91 (13%)	

Results

The 5 and 10 year Kaplan-Meier estimates were: local control, 53% and 53%; regional control, 55% and 47%; locoregional control, 34% and 29%; relapse-free survival, 30% and 26%; and overall survival, 29% and 21%, respectively. Ninety percent of recurrences occurred within 2 years of treatment. Sixty percent of all failures were local, 29% were regional, and 11% were distant failures alone. Seventeen percent of the failures were in the paraaortic nodes with no evidence of failure in the pelvis. There was a suggestion that elective irradiation of the paraaortic nodes decreased failures in the paraaortic nodes (0% for patients who received elective paraaortic irradiation vs. 13% for patients who did not), but this difference was not statistically significant. A wide range of demographic, treatment, and technical factors were evaluated with univariate and multivariate analysis with the endpoint being relapse-free or overall survival. No factor was found to be statistically significant. Complications of therapy were scored using the RTOG grading system: the overall severe late complication rate was 13% (grades 3-5).

Conclusions

With long-term follow-up, approximately one third of patients with stage IIIB or IVA cervix cancer are cured with a 15% complication rate. This series demonstrates what can be achieved without chemotherapy because 86% of the patients were treated with radiotherapy alone. Our study confirms that pelvic failures continue to be the major cause of mortality in these patients, despite aggressive local therapy.

