

Adherence to Scheduled Reduced Smoking Intervention among Newly Diagnosed Cancer Patients

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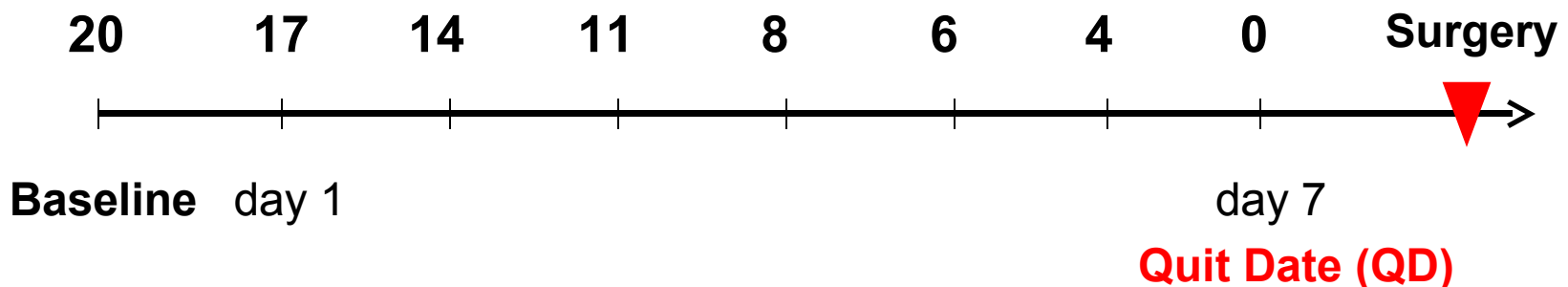
Supported by grants R01CA90514 and T32CA009461

Background and Significance

- 33-78% of cancer patients continue to smoke after cancer diagnosis.¹⁻⁷
- Benefits of smoking cessation before cancer surgery:
 - Lower risk of peri- and post-operative complications
 - Improved pulmonary health and lower need for pulmonary rehabilitation
 - Improved surgical wound healing and lower risk of infection
 - Greater likelihood of shorter hospitalization and surgical time
- Barriers to quitting and maintaining abstinence for cancer patients:
 - Pressure to quit abruptly
 - High levels of nicotine dependence and severe withdrawal symptoms
 - High levels of psychological distress
 - Loss of a coping strategy
 - Low quitting self-efficacy (confidence) due to multiple prior failed quit attempts

SRS – intervention, where participants are “instructed to smoke only at specific times of the day and the inter-cigarette interval is progressively lengthened to accommodate planned reductions in smoking frequency” (Cinciripini, 1995)


Example of Tapering Smoking Schedule (1 wk)




N = 74, Mean (QD) = 10 days (SD = 4), range = 5 – 22 days


Mean baseline no. cigarettes/day = 19 (9), range = 8-40 cigarettes/day


PROJECT CASSI MAIN SCREEN


 Friday, Jun 28, 11:01 am
Day 2 of Reduced Smoking


Your Start Date is: Wed, Jun 26.
Your Quit Date is: Thu, Jul 18.
Your Quit Date is 20 days from now.


 Record cigarette or temptation

 Make a quit attempt

 View calendar of events

 Change my wake up & bed times


 View personal and contact info


 View online help and tip guide


DAILY CALENDAR


Thursday, Jun 27, 2002

Type/Time	Events
9:00 am	Wake Up
9:45 am	Smoked
10:30 am	Missed
11:15 am	Missed
12:00 pm	Smoked
12:00 pm	Quit Attempt
12:45 pm	Missed
1:30 pm	Missed
2:15 pm	Missed
3:00 pm	Missed ???
3:45 pm	Smoked
4:30 pm	Smoked
5:15 pm	Scheduled

 Record Cig/Urge

 Weekly View


 Monthly View


 Main Screen

SCHEDULED CIGARETTE ALARM

You are scheduled to smoke a cigarette at 10:30 am.

Are you going to smoke it within the next 10 minutes ?

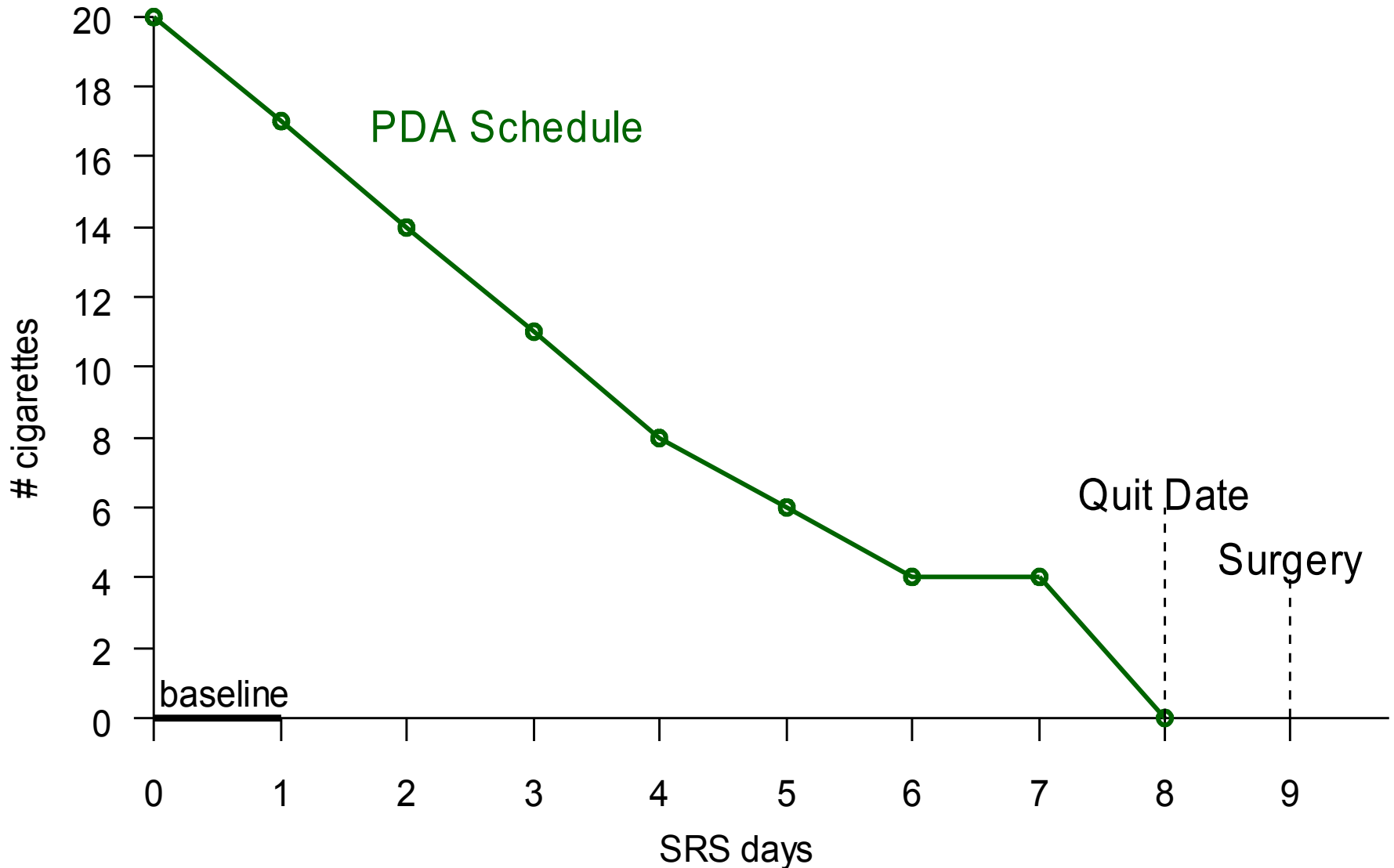
 No, I'm not

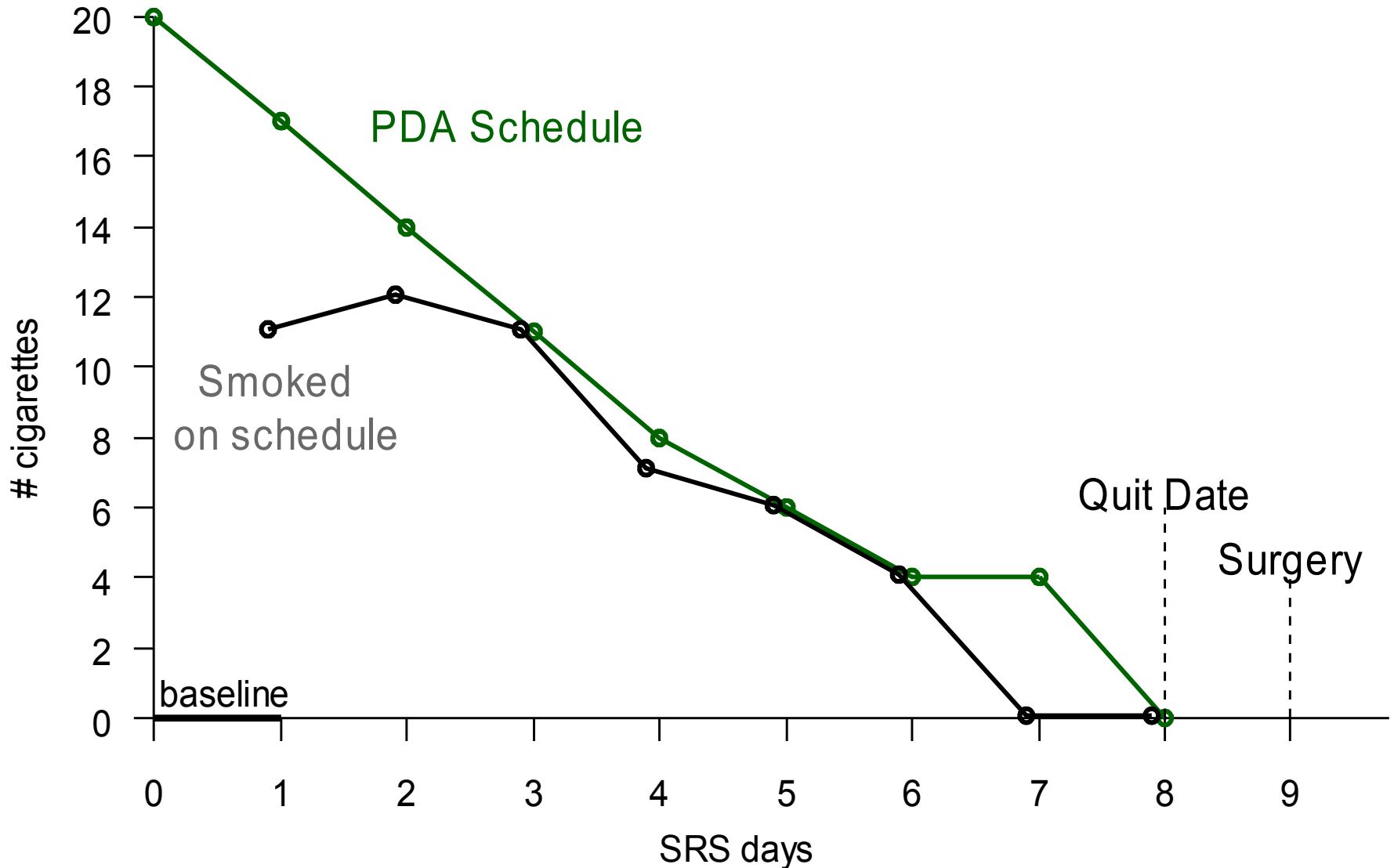
 Yes, I am

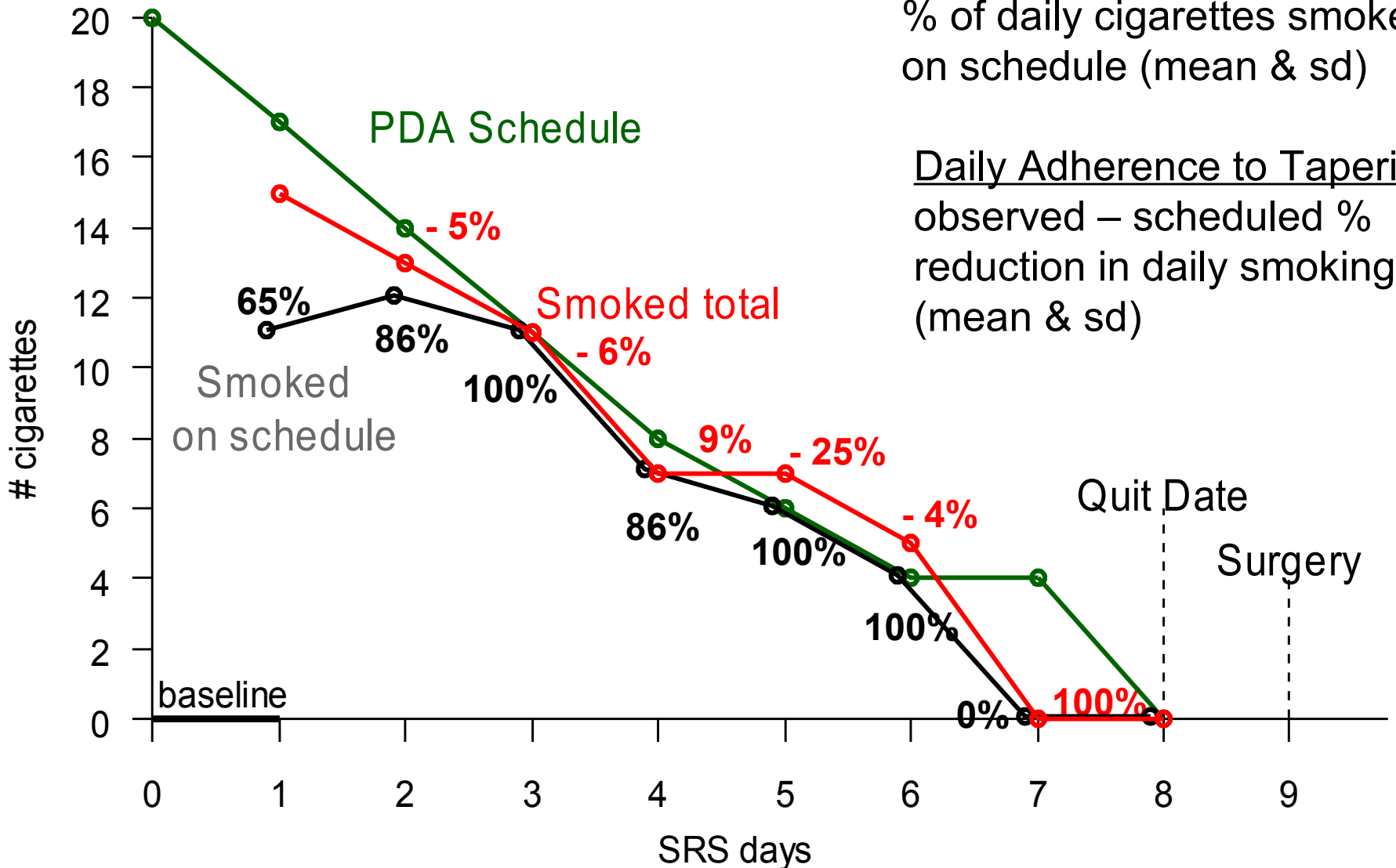
The device recorded smoked, missed, & added cigarettes for every subject, for every day in REAL TIME.

- Aims: 1. Examine adherence to SRS
 2. Test whether adherence is predictive of smoking abstinence

Characteristics	SRS Arm (n = 74)
Age (M,SD, Range)	56.1 (10.3) Range 31-85
Gender (%)	
Female	36 (49%)
Minority (%)	
Non-White	13 (18%)
Cancer Diagnoses (%)	
Thoracic	30 (34%)
Urology	18 (20%)
Breast	8 (9%)
Other	33 (37%)

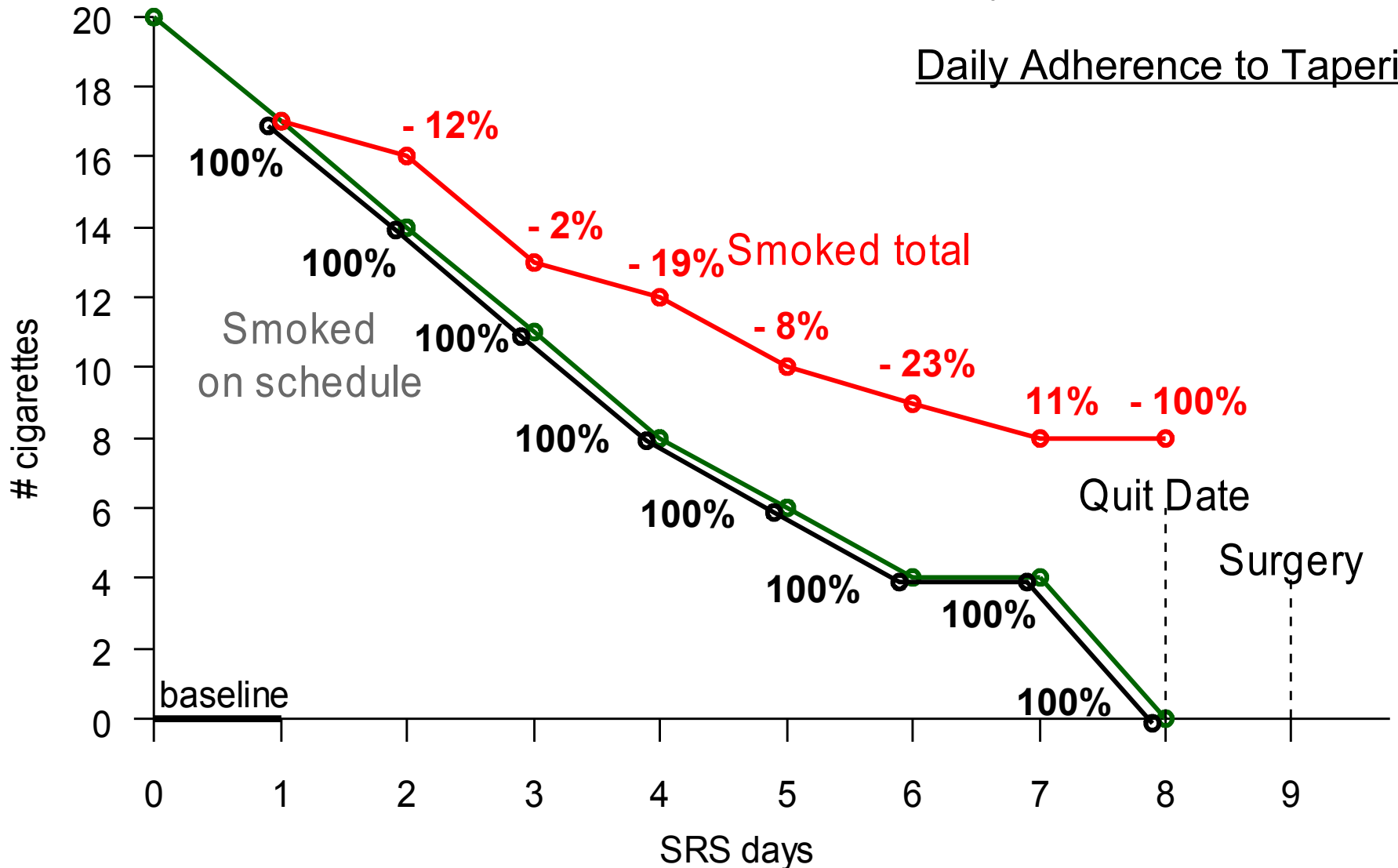






Daily Adherence to SRS

Daily Adherence to Tapering



Indicators of Adherence	Mean (SD), range
Mean adherence to SRS treatment delivery	50% (30), 0 to 98%
Mean within person variability in adherence to SRS treatment delivery	24% (12), 0 to 50
Mean adherence to SRS tapering schedule	22% (47), -17 to 303%
Mean within person variability in adherence to SRS tapering schedule	82% (99), 6 to 530

35 patients (47%) quit smoking prior to hospitalization

Based on the results of logistic regression:

- Average adherence to Tx delivery as well as the extent of daily variability in the adherence to Tx delivery were not significant predictors of AH ($p = .14$ & $p = .73$)
- Average adherence to tapering was a significant predictor of AH (OR = .014, CI = [.0003; .7], $p = .03$)†.
- Daily variability in tapering was also a significant predictor of AH (OR = 9, CI = [1.5; 54], $p = .02$)†.
- Additional covariates such as patient demographics, cancer site, nicotine dependence, and self-efficacy did not predict AH.

- Despite the demands of this intervention delivered in acute cancer care, we found overall good adherence.
- Patients are more likely to attain smoking abstinence before hospitalization for cancer surgery if they reduce more than prescribed by the SRS.
- Conversely, exceeding the prescribed daily cigarette allowance is detrimental to SRS success.
- Real-time data capture allows researchers to provide a nuanced interpretation of adherence in SRS.