

Evaluating the Impact of Neoadjuvant Immune-Checkpoint Inhibitors on DIEP Flap Breast Reconstruction

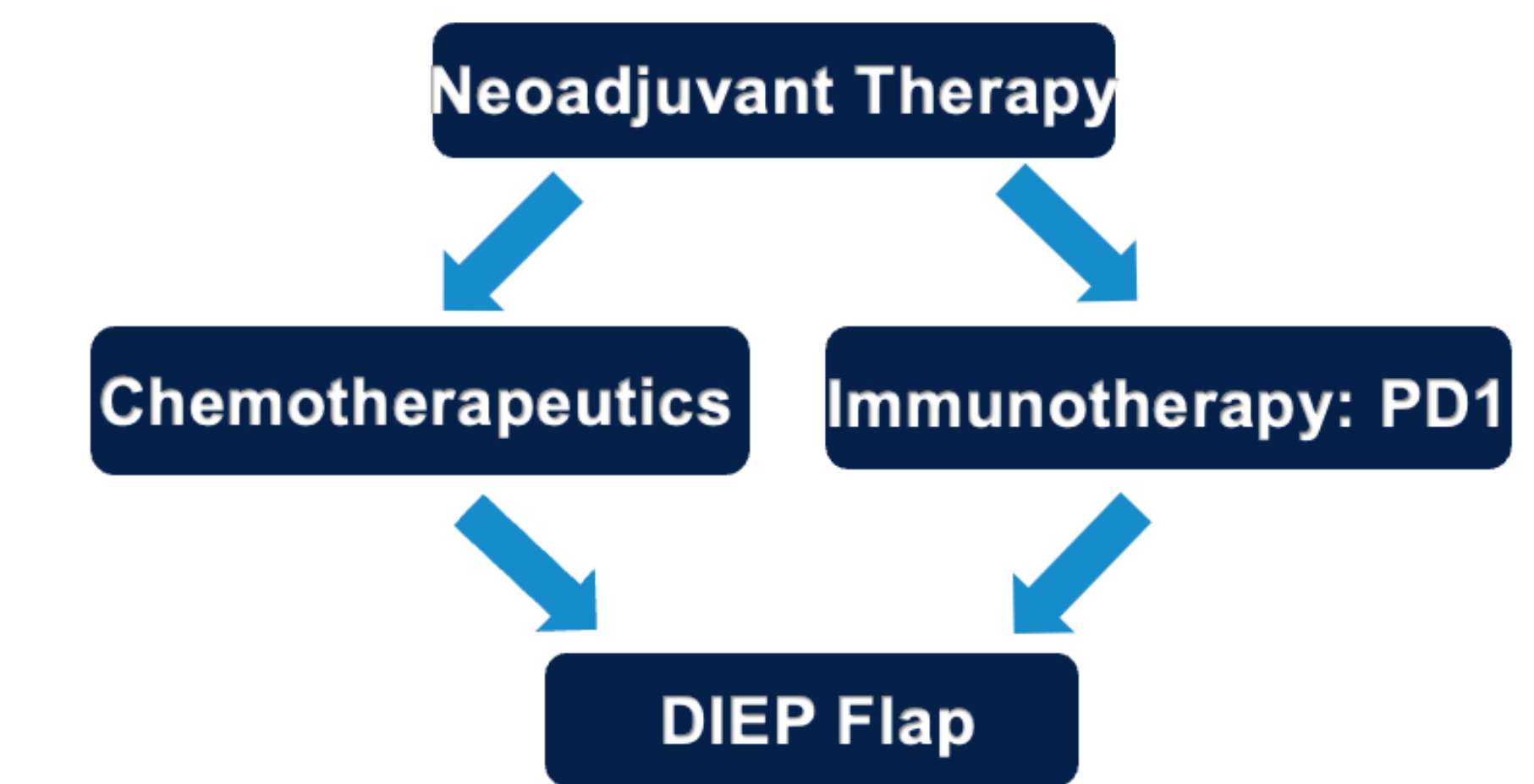
Jasmin Wilson BS, Jacquelyn Knox MD, Nisha Parmeshwar MD, Aileen Gozali MM, Laura Barnes MD, Merisa Piper MD

BACKGROUND

- New immunotherapies → improved oncologic outcomes in breast cancer
- Increased use of programmed cell death – 1 (PD1) inhibitors (ex: pembrolizumab)
- Unknown impact of these therapies on wound healing

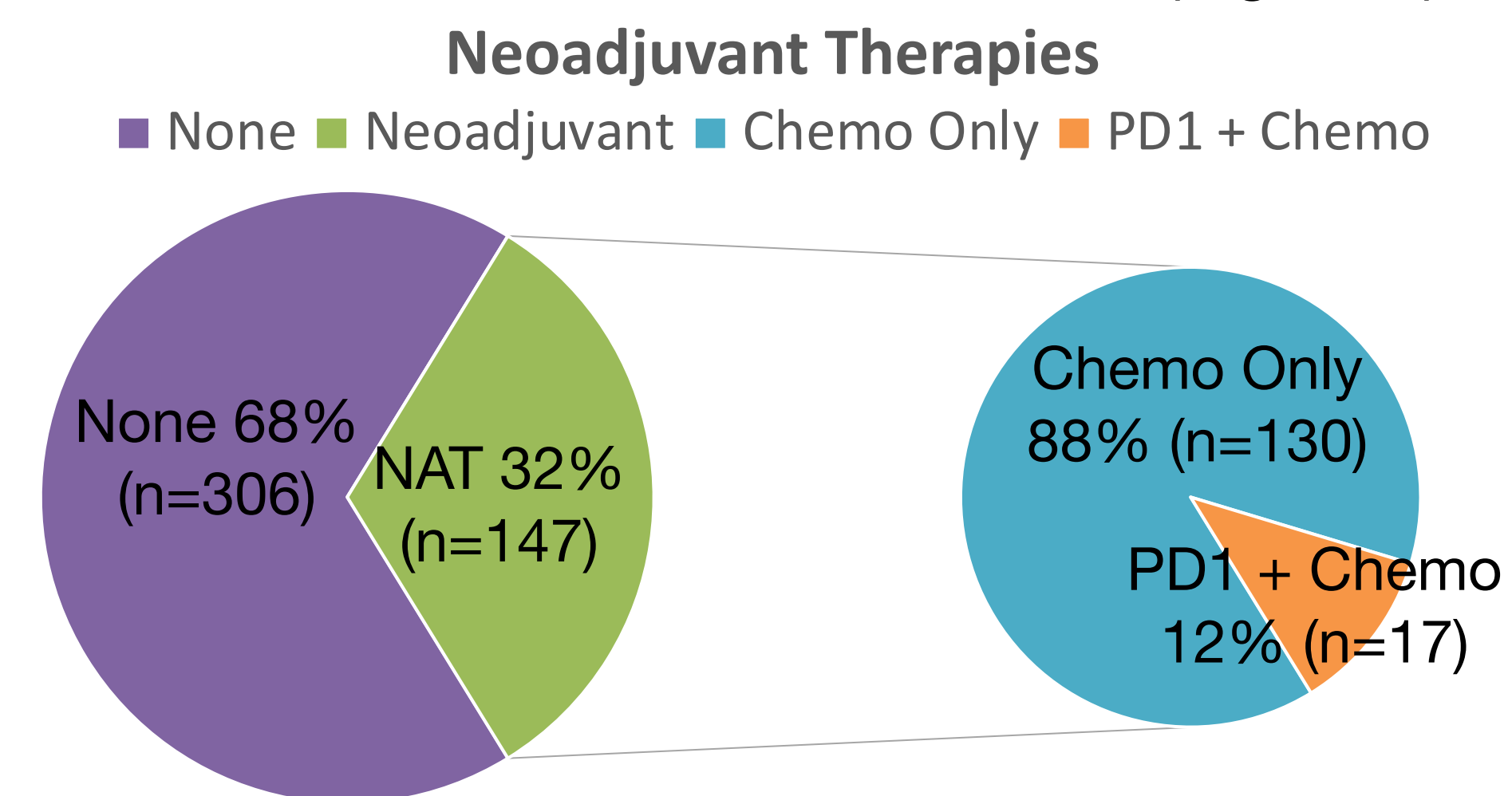
METHODS

- Retrospective review November 2004 - December 2022



RESULTS

- 453 patients (694 flaps)
- Compared patients with:
 - Neoadjuvant therapy vs. none (Figure 1)
 - PD1 + chemo vs. chemo alone (Figure 2)



DISCUSSION

- Neoadjuvant therapy patients had similar complication rates to those without neoadjuvant treatment.
- The addition of PD1 inhibitors did not significantly increase complication rates.
- Larger sample size needed to determine true impact of PD1 inhibitors on outcomes.

Figure 1. Postoperative Complications
Neoadjuvant therapy vs. None, univariate

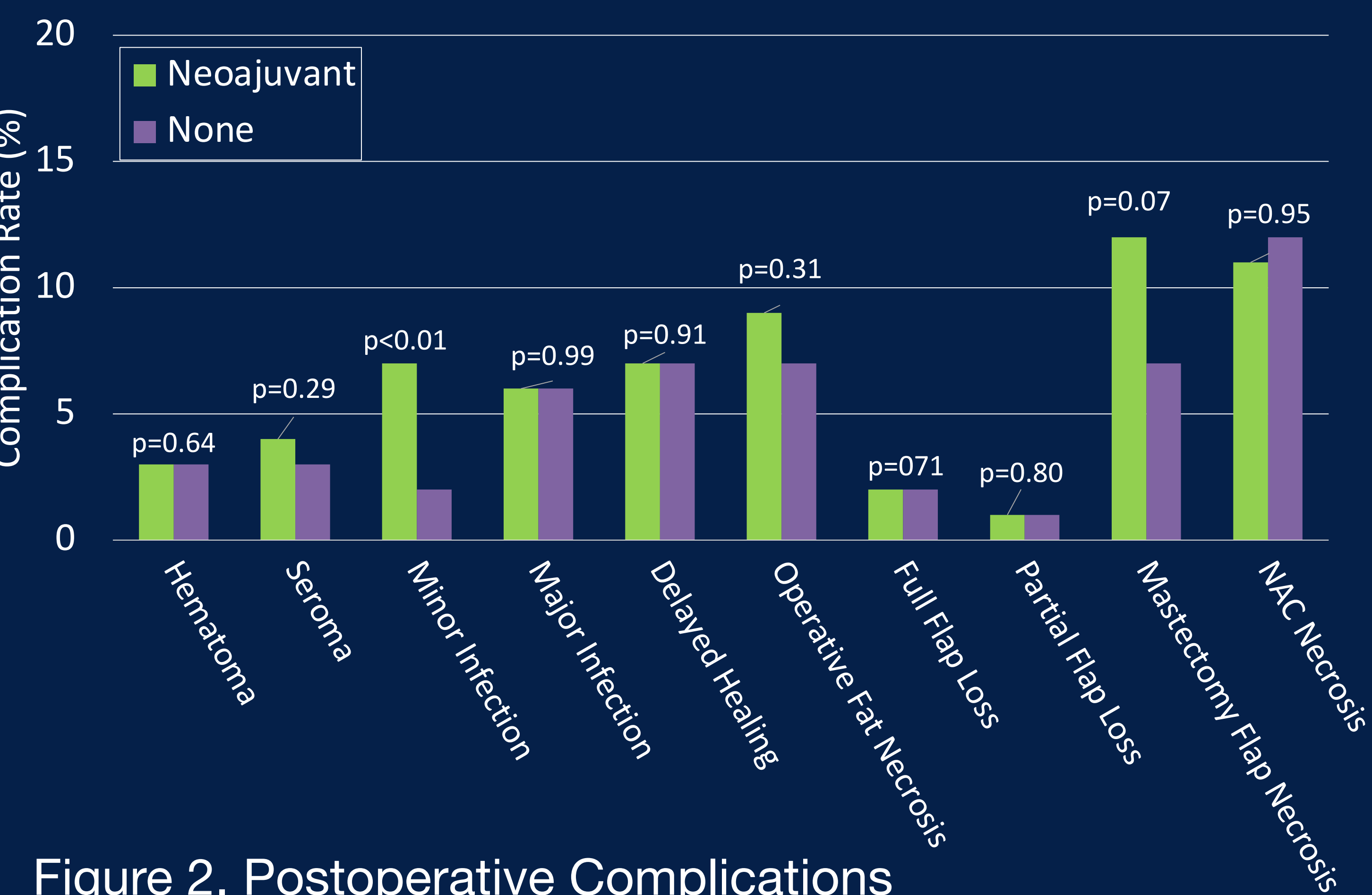
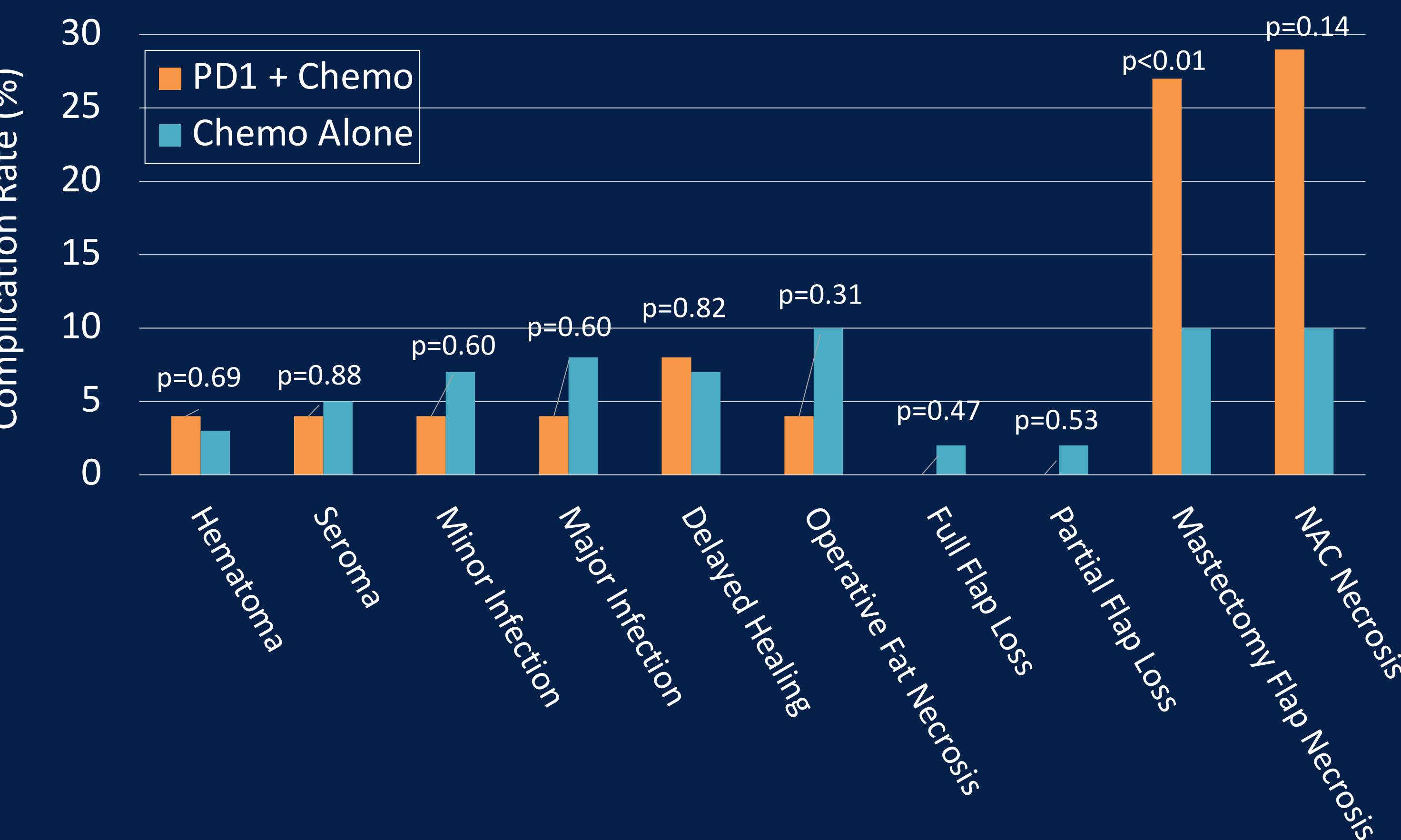
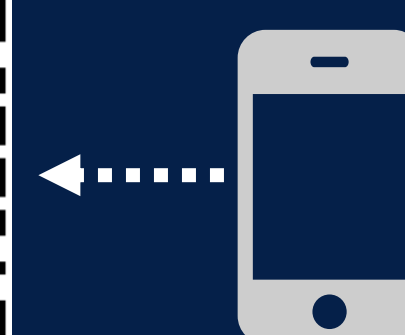


Figure 2. Postoperative Complications
PD1 + Chemo vs. Chemo Alone, univariate



On multivariate analysis, only immediate reconstruction was significantly associated with increased complications → 27x odds of mastectomy flap necrosis.



Take a picture or scan to read the published abstract

While **neoadjuvant therapy patients** had higher rates of post-operative infection, this was **not significant** on multivariate analysis.

The addition of a **PD1 inhibitor** to the chemotherapy regimen → higher rates of mastectomy flap necrosis, though this was **not significant** on multivariate analysis.



University of California
San Francisco

AMMO BAR

Results

Demographic and Surgical Details

Neoadjuvant Therapy vs. None

	Neoadjuvant Tx (n=147 patients)	No Neoadjuvant Tx (n=306 patients)	P
Demographics			
Age	50 ± 9	48 ± 11	0.12
BMI	29 ± 5	29 ± 6	0.51
DM	8 (5)	20 (7)	0.65
Current Smoking	6 (4)	19 (6)	0.35
Treatment Details			
Neoadjuvant XRT	60 (41)	110 (36)	0.32
Reconstruction Timing			
Immediate	59 (40)	130 (42)	0.64
Delayed	88 (60)	176 (58)	

PD 1 + Chemo vs. Chemo Alone

	PD1 + Chemo (n=17 pts)	Chemo Only (n=130 pts)	P
Demographics			
Age	43 ± 11	49 ± 10	0.01*
BMI	33 ± 10	29 ± 6	0.02*
DM	2 (12)	6 (5)	0.17
Current Smoking	0 (0)	6 (5)	0.39
Treatment Details			
Neoadjuvant XRT	4 (24)	55 (42)	0.23
Reconstruction Timing			
Immediate	9 (53)	47 (36)	0.08
Delayed	6 (35)	82 (63)	

- On multivariate analysis, immediate reconstruction was associated with 36x higher odds of mastectomy flap necrosis, while neoadjuvant therapy was not significantly associated.