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# Image Guided Superficial Radiotherapy(IGSRT) Treatment Of Early Stage Non-Melanoma Skin Cancer(NMSC) Shows Excellent Local Control and Cosmesis In The Outpatient Dermatology Clinic In New York

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## INTRODUCTION

Non-Melanoma Skin Cancer (NMSC):

- The Most Common Cancer in the USA/World
- 70-80+% On Head & Neck
- Generally Treated Using **Surgical** Techniques –
  - Mohs, Excision, ED&C, etc.
- ❑ **Surgery → Scar +/- Defect, Possible Deformity/Flap**

## OBJECTIVE

Evaluate An **Office-Based Non-Surgical** Method:

### Image Guided Superficial RadioTherapy (IGSRT)

- Feasibility
- Tolerance
- Effectiveness
- Cosmesis

## MATERIALS & METHODS

April 2017 -August 2018

- 87 Patients
- 123 Early Stage NMSC Lesions

All Lesions Treated With:

- Twenty Fractions
- 3-4 Fractions/Week
- 50 or 70 kiloVoltage(kV) Energy Determined By Imaging (Ultrasound-Integrated With Treatment Unit)

Evaluation During and After Treatment Every 2-8 Weeks:

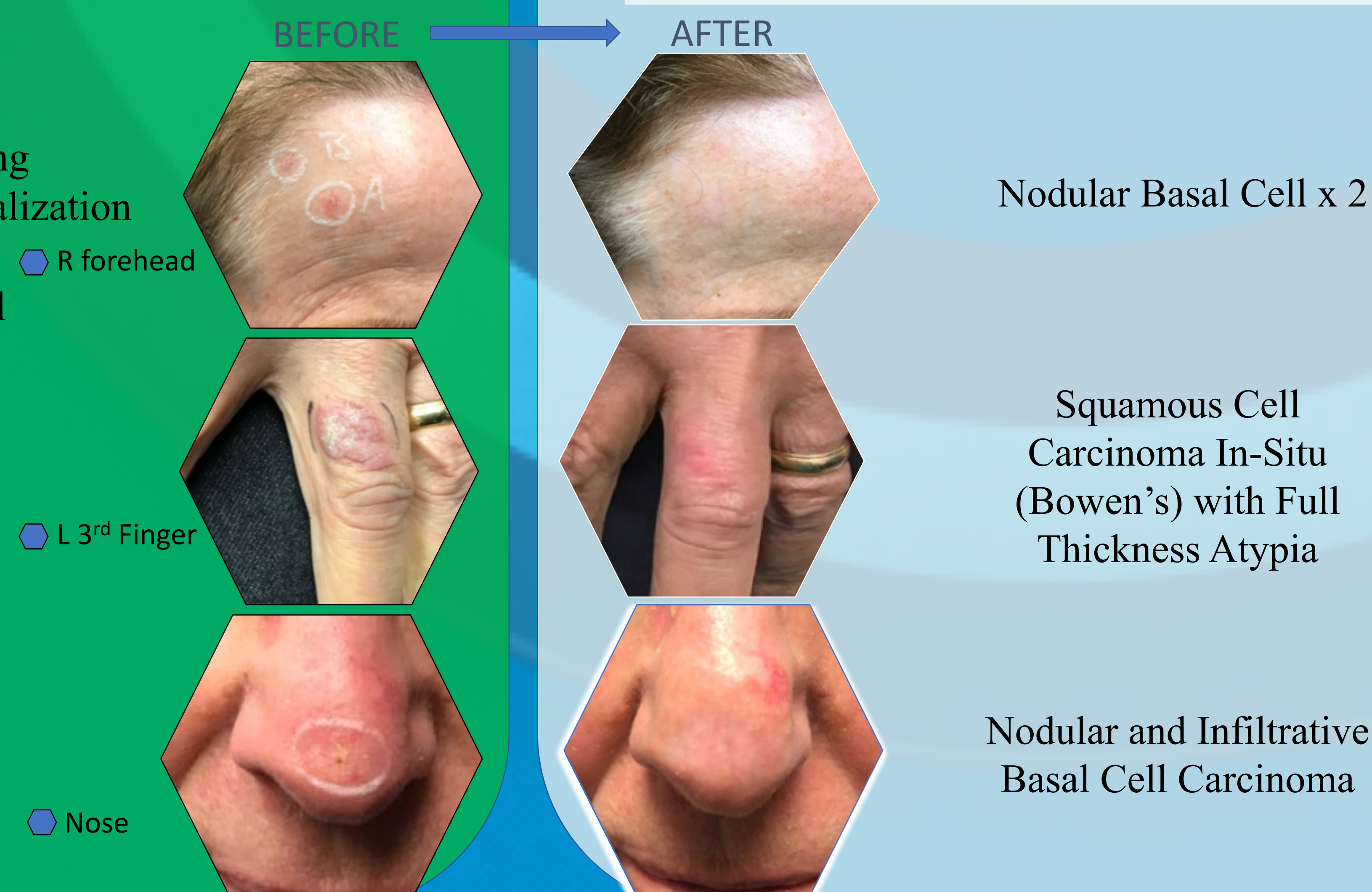
- Toxicity- RTOG Grading
- Treatment Interruption (>2 weeks)
- Disease Response/Status (NED or Failure)

IGSRT Features:

- Portable Office-Based Unit
- Integrated Ultrasound Imaging
- Allows Depth/Lesion Localization
- Response Assessment
- Solid State Feedback/Control
- 50kV, 70kV, 100kV Energy
- Record & Verify Capability

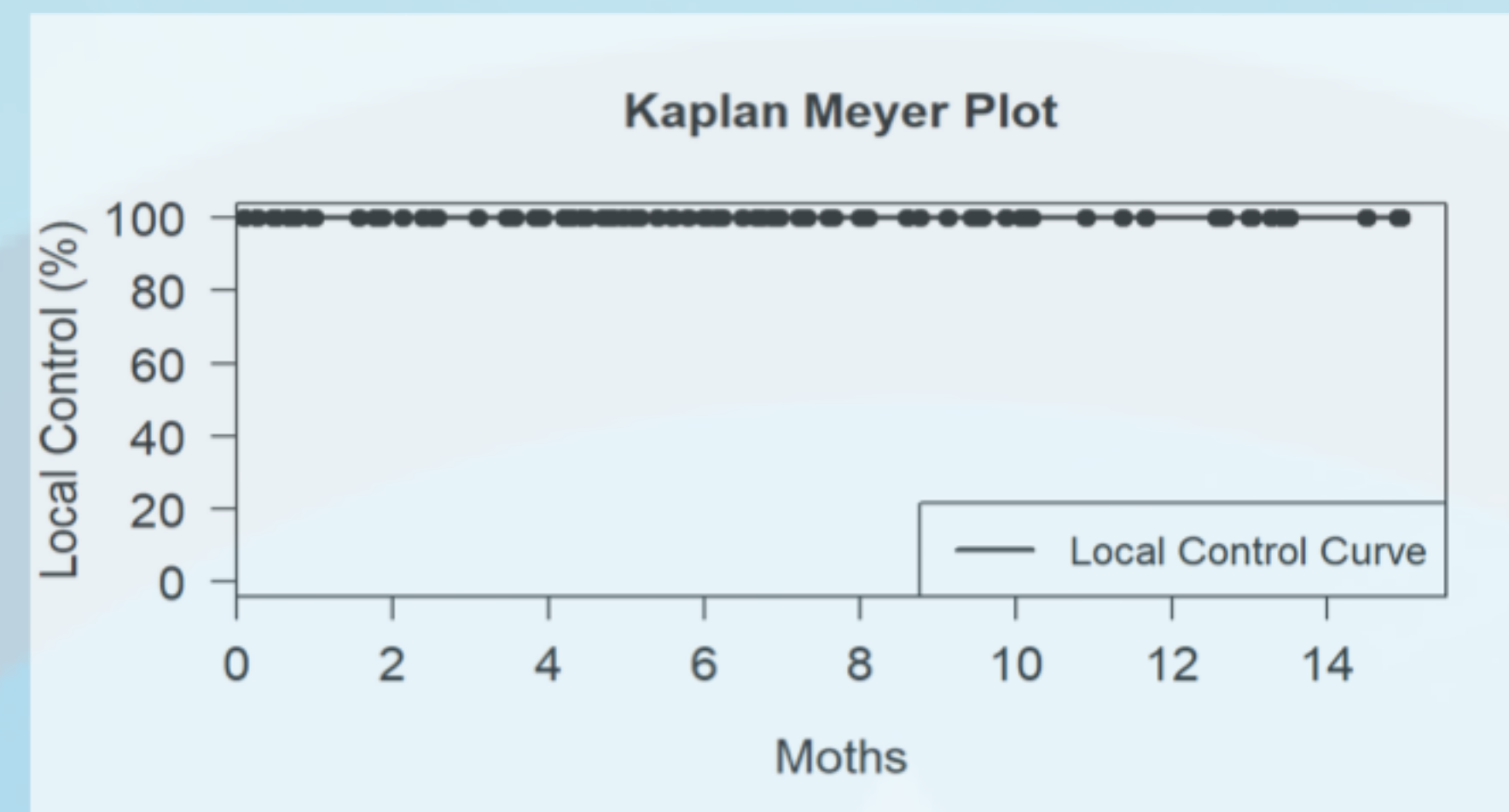


IGSRT Unit

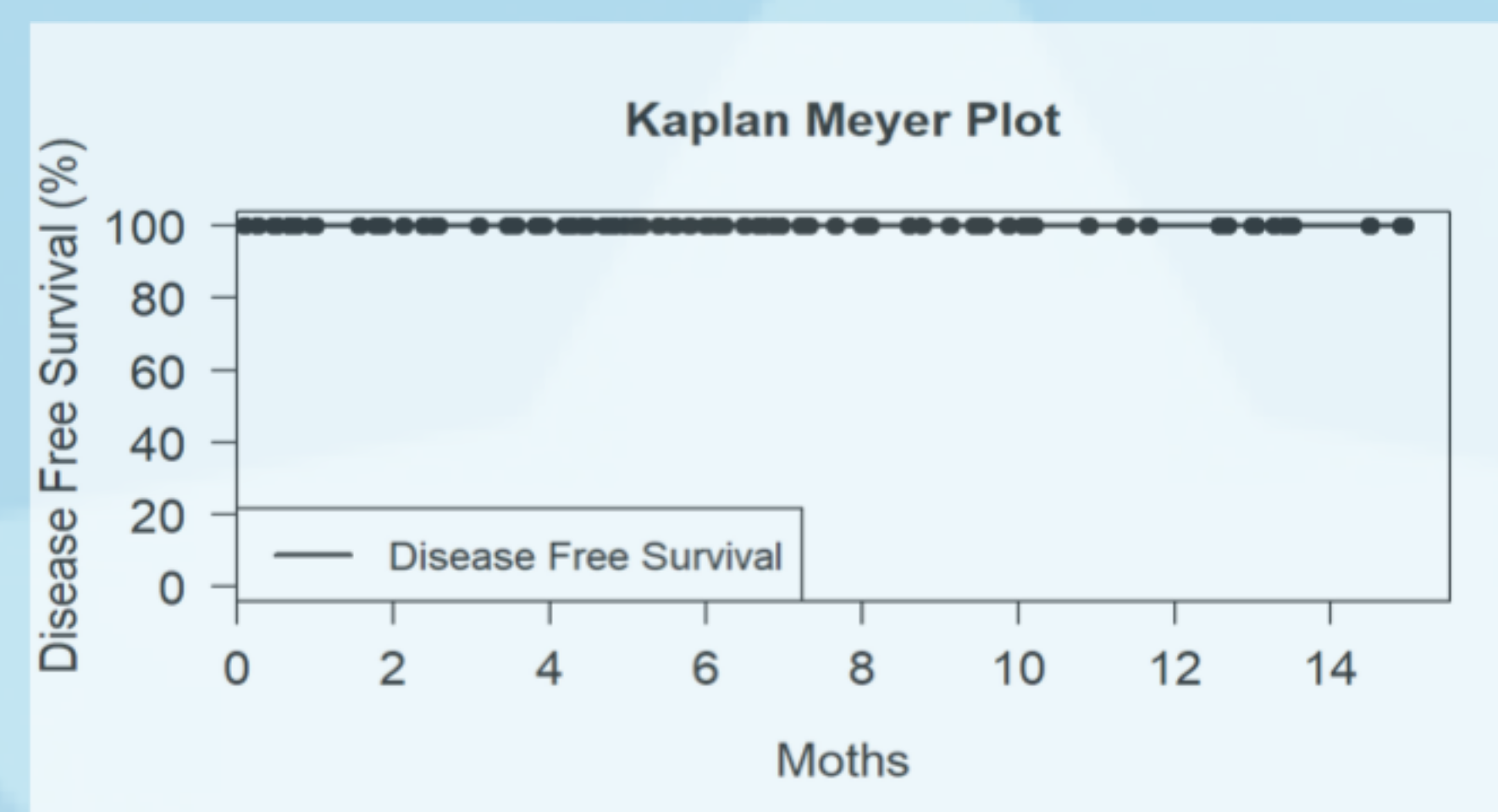


## RESULTS

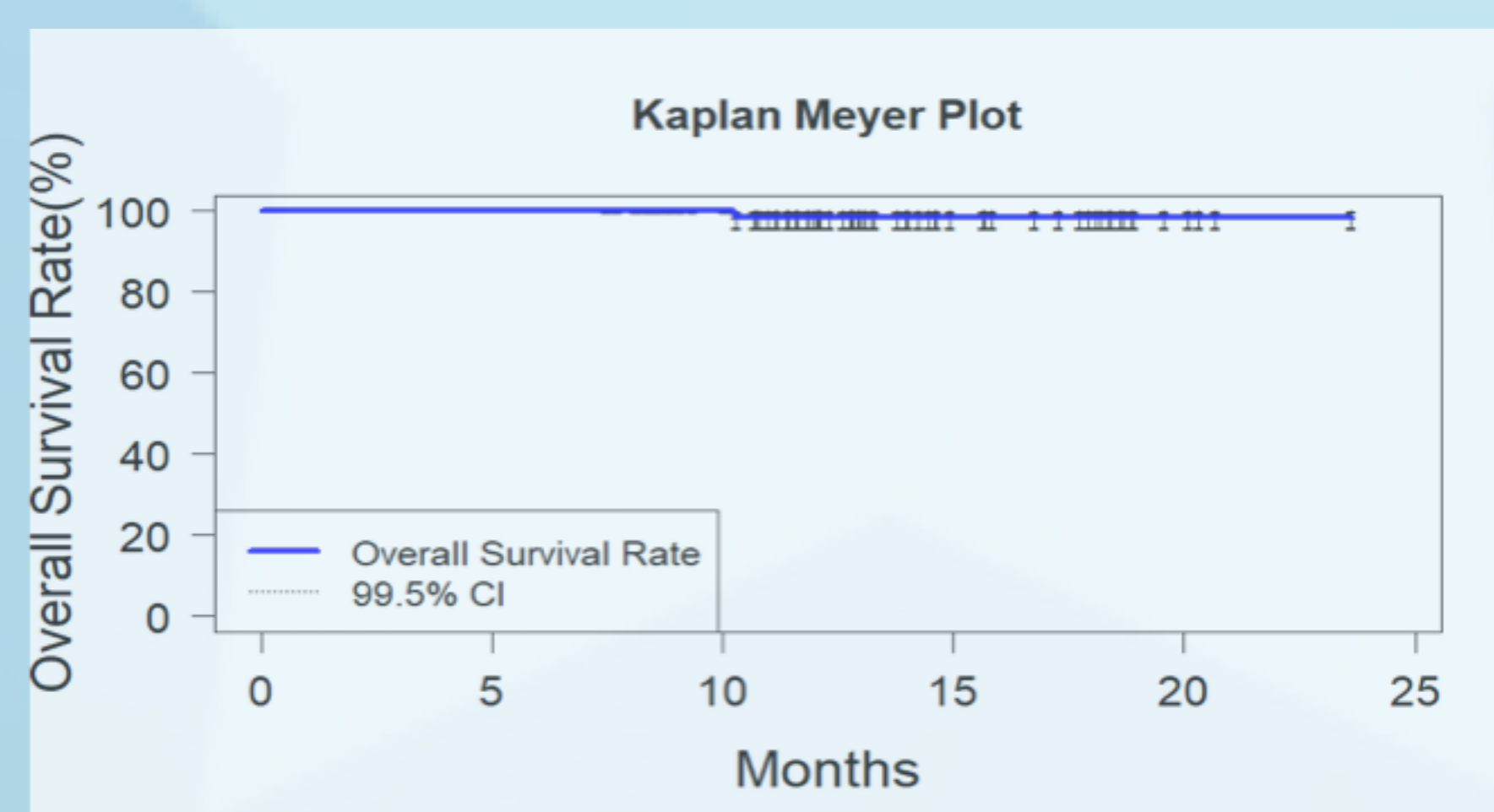
LOCAL CONTROL = 100%



DISEASE FREE SURVIVAL= 100%



OVERALL SURVIVAL = 98.9%



## Acute Toxicities (RTOG Grade):

- Grade 0, 1 or 2 (none, mild, moderate)- in **all** lesions
- Grade 3/4 toxicity- **None**.

## Treatment Interruptions From Side Effects:

- **None**.

## Late Toxicities/Complications:

- **None**

## Cosmesis:

- **Overwhelmingly excellent** per clinicians
- Poor/unacceptable cosmesis- **None**
  - ✓ **IGSRT → NO SCAR OR DEFECT**

## CONCLUSIONS

### ➤ Office Based IGSRT is:

- ✓ Feasible
- ✓ Safe
- ✓ Easily Tolerable

### ➤ Highly Effective:

- ✓ Stellar 100% Local Control
- ✓ 100% Disease Free Survival

### ➤ Provides Overwhelmingly Excellent Cosmesis

### ➤ An Outstanding NON-INVASIVE TOOL

### ➤ No Scar or Defect

## ACKNOWLEDGMENTS:

- ❖ Data Collection: Krupal Patel, BS candidate SUNY Stony Brook, NY
- ❖ Statistical Analysis: Songzhu Zheng, MA, Applied Math and Statistics PhD candidate SUNY Stony Brook NY

## QUESTIONS?

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# Polarized Dermoscopic Features of Basal Cell Carcinoma and Squamous Cell Carcinoma (Box In Red)

