

## Background

Breast cancer is Ireland's most commonly diagnosed cancer in females.\* Almost 1 in 10 women will develop the disease during their lifetime with 36% of these diagnosed after the age of 65.<sup>1</sup>

The incidence of breast cancer diagnosis in patients over 70 had increased by 45% between 1994 and 2015 (256 to 372 per 100,000).<sup>1</sup> In 2015, 846 new breast cancer cases diagnosed in this population.<sup>1</sup>

There is controversy regarding the optimal management of breast cancer diagnosed after the age of 70, when comorbidities, polypharmacy and frailty can often limit treatment options.

The aim of this study was to examine a modern cohort of Irish women diagnosed with breast cancer aged ≥70.

## Method

We performed a retrospective review of a prospectively maintained database of all newly diagnosed invasive breast cancers from January 2009 to December 2014 in the Symptomatic Breast Health Unit of The Mater Misericordiae University Hospital.

We included all patients aged ≥70 at diagnosis who underwent surgery for breast cancer, including patients who failed primary endocrine therapy. We excluded patients with a prior history of breast cancer. We examined patient tumour characteristics, treatment and outcomes.

## Patient Selection

539 primary breast cancers were diagnosed in 488 patients aged ≥70, of which 6 were male. 51 had bilateral disease at presentation.

34.8% (n=170) received primary endocrine treatment 5.3% (n=26) received other treatment (primary chemotherapy, radiation therapy or no treatment). 5 patients who were initially commenced on PET, proceeded to have surgery and were included in the study.

297 (60.9%) of the patients admitted during our review period with primary breast cancer received surgical treatment. (Figure 1)

44 patients within this group were investigated at our institution but had surgery performed at a different institution and so were excluded from our study as we could not perform reliable follow up.

253 patients were included for review in this study.

## Results

This cohort had a mean age of 75.9 (range 70-92) at the time of surgery.

### Tumour Characteristics

Mean tumour size was 25.26mm (range 1.9-88 mm). The majority of tumours were ER positive (83.26%, 184/221) and PR positive (63.26%, 136/215). HER2 was overexpressed in 26 (12.04%).

26 (12.04%) patients were diagnosed with triple negative breast cancer. (Figure 2)

77/253 (30.4%) had nodal disease.

FIGURE 1: MANAGEMENT

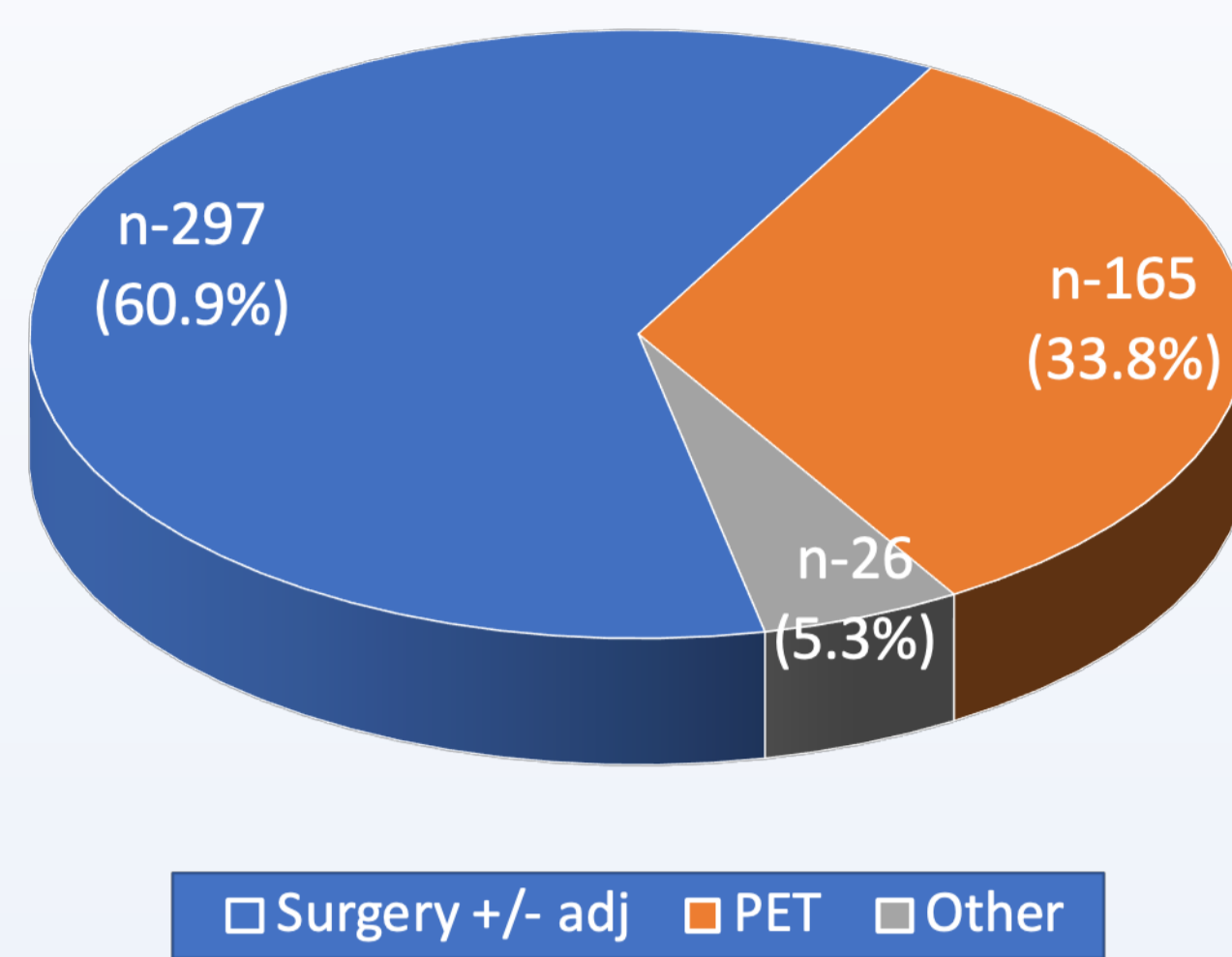


FIGURE 2: TUMOUR RECEPTOR STATUS

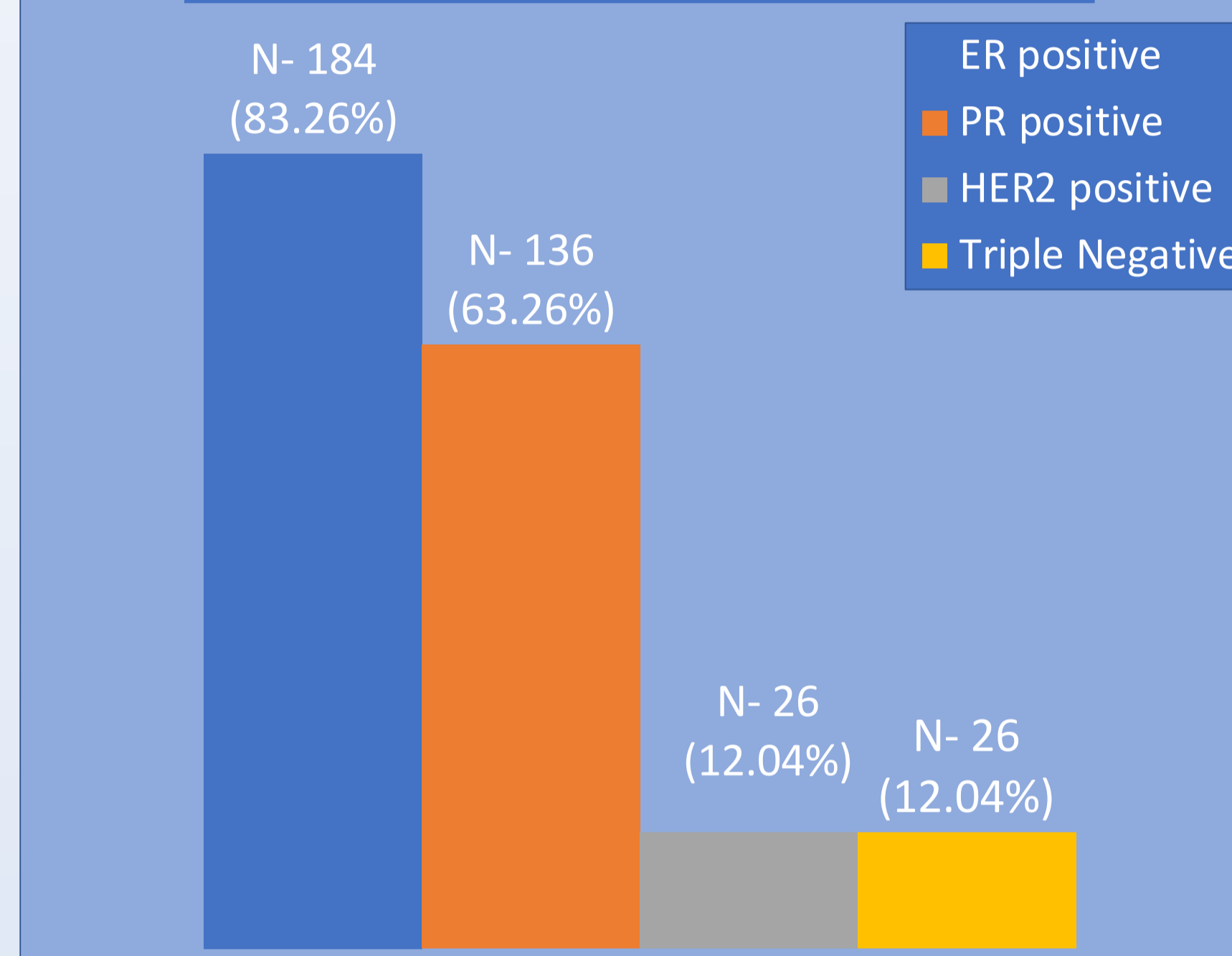


FIGURE 3: SURGICAL PROCEDURE

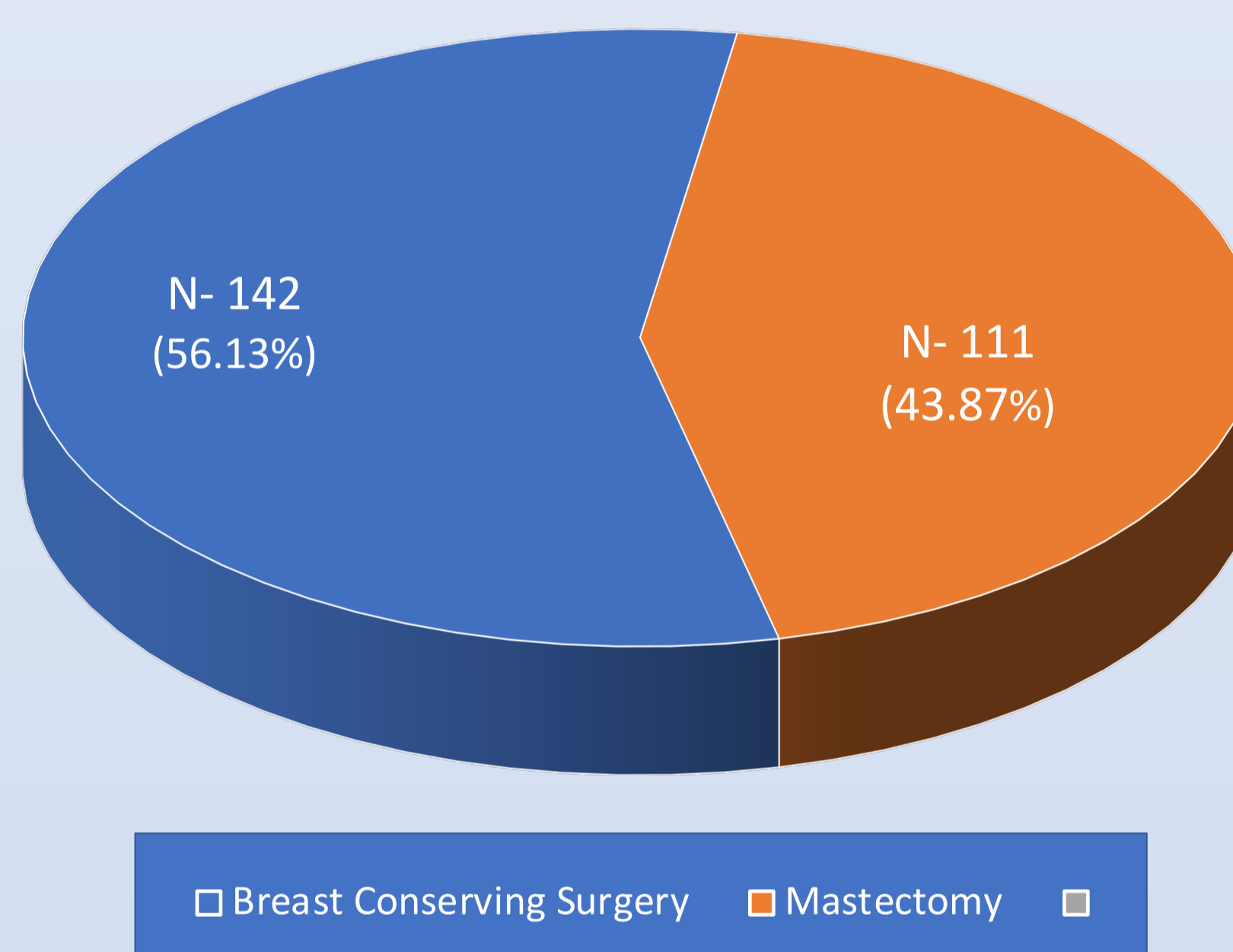


FIGURE 4: AXILLARY PROCEDURE

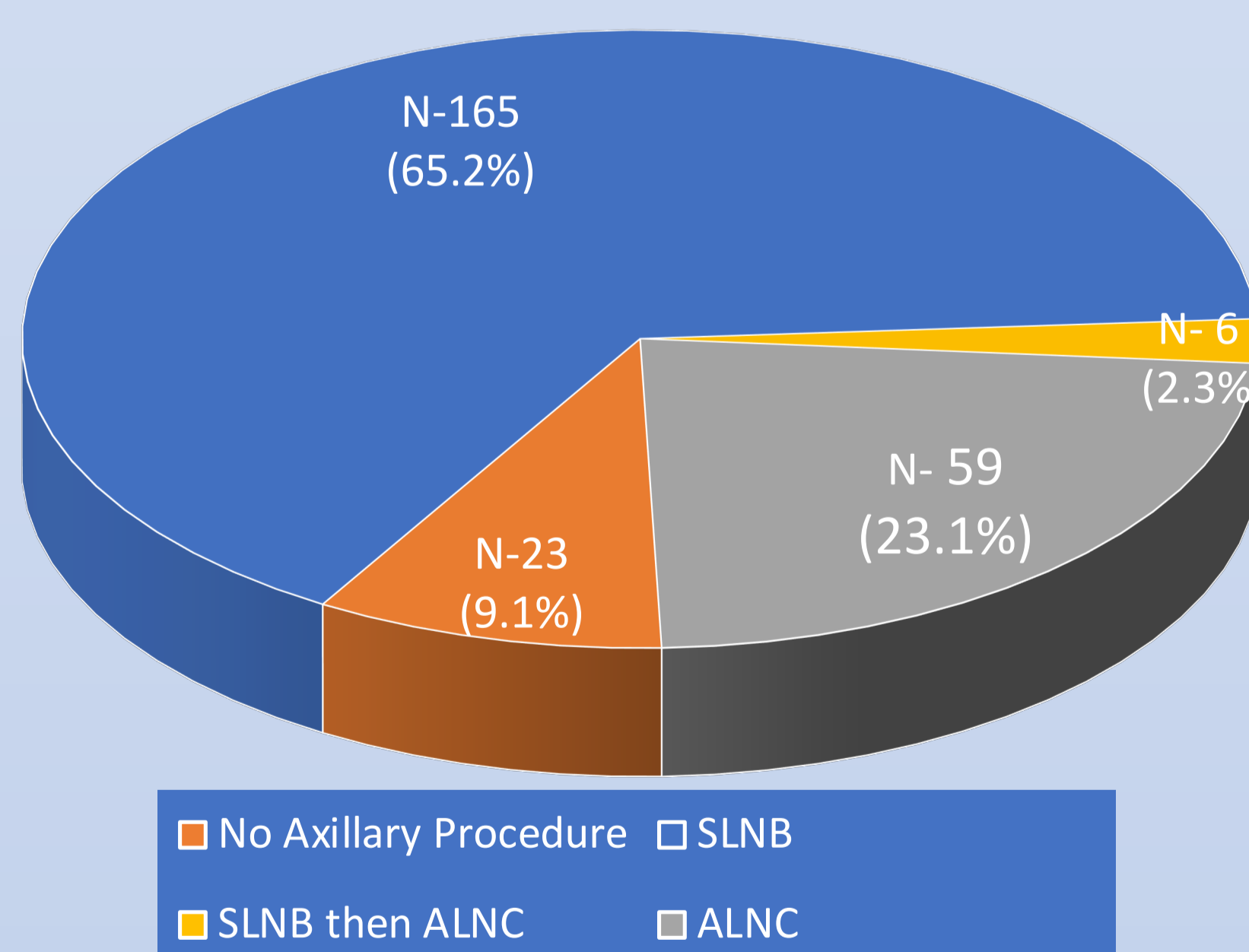
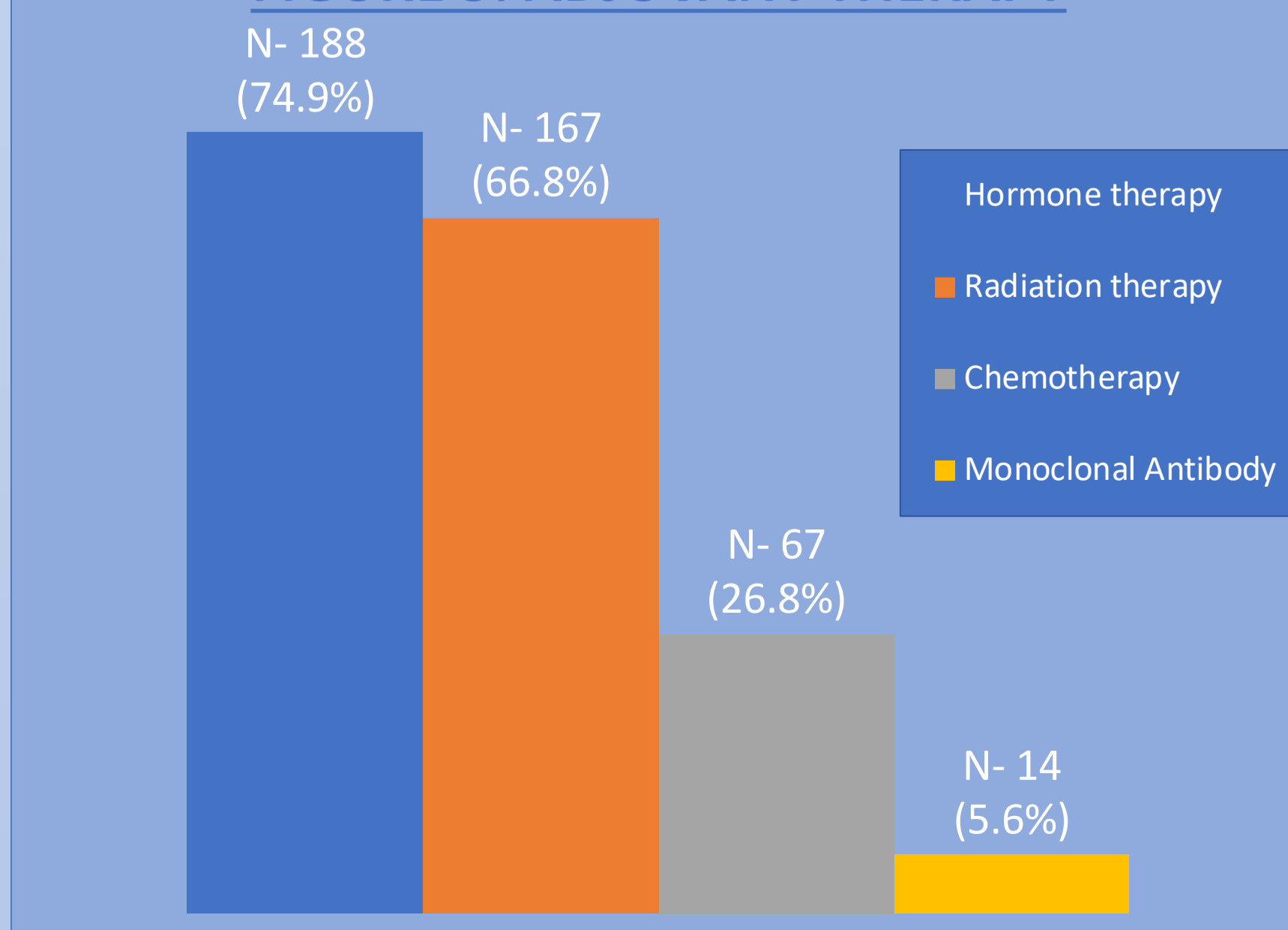


FIGURE 5: ADJUVANT THERAPY



## Treatment

### Surgery

56.13% had a wide local excision performed and 111 (43.87%) had mastectomy. (Figure 3)

165 patients had a sentinel lymph node biopsy (SLNB), 6 patients had a SLNB followed by an axillary lymph node dissection (ALND), 59 patients had an ALND only and the remainder had no axillary procedure. (Figure 4)

Average length of stay was recorded at 3.53 days. There was no significant difference in length of stay between patients receiving mastectomy or wide local excision (3.53 vs 3.46 days).

8 patients required re-excision of margins, giving a re-excision rate of 5.6% (n= 8/142).

### Adjuvant therapy

74.9% of patients who underwent surgical resection received adjuvant hormone therapy and 66.8% received adjuvant radiation therapy. (Figure 5)

## Outcomes

### Complications

3 patients required return to theatre. (2 for wound haematoma (0.78%) and 1 for revision of breast flap (0.39%).

There were 3 confirmed wound infections, all managed in the out-patient setting (rate: 1.18%).

### Follow up

Mean time of follow up was 43.5 months (range 0-124). 4 patients developed local recurrence.

### Mortality

There have been 86 recorded deaths in this cohort to date. (33.99%) The average time from surgery to death of 51 months.

There was 1 recorded 30-day mortality (0.39%) and 3 90-day mortalities (1.17%).

## Conclusion

Our data is in line with international published figures for this patient cohort, in terms of both tumour characteristics and management.

Breast cancer diagnosed at an older age is often treated less aggressively. This study shows that breast surgery carries a low risk of peri-operative mortality, even in elderly patients, suggesting that with careful patient selection, therapeutic surgery can be a safe and effective option. Further research is needed to determine the optimal treatment of these patients.

## References

- <sup>1</sup> National Cancer Registry Ireland: Incidence statistics.  
 \*excluding non melanoma skin cancer