

## INTRODUCTION

Macromastia in adolescence may result in back and shoulder pain, dermatitis of the inframammary folds, respiratory issues, unhealthy body image, and limitations on physical activities. Reduction mammoplasty is a common surgical procedure to alleviate these bothersome symptoms and is usually recommended after failed conservative measures. Due to possible need for revision surgery, insurance companies may impose strict age restrictions for adolescent reduction mammoplasty. We investigated trends in insurance coverage for adolescent reduction mammoplasty in cases of macromastia at Lurie Children's Hospital (LCH).

## MATERIALS and METHODS

We retrospectively reviewed LCH cis-gender female patients aged 12-20 years with a ICD-10 diagnosis code of N62 "Hypertrophy of Breast" who were referred to pediatric plastic surgery for reduction mammoplasty between the years 2012-2022. Ages at times of diagnosis and surgery, insurance approval/denial, and any hospital financial subsidies were recorded. T-tests, Chi-Squared, and Fisher's Exact tests were performed for any significance in patients' age at time of diagnosis and insurance coverage for breast reduction.

## RESULTS

Age (years)	# of Patients Diagnosed with Breast Hypertrophy	# of Patients Referred to Pediatric Plastic Surgeon	# of Patients Undergoing Breast Reduction
12-14	17	6	3
15-17	77	47	26
18-20	27	17	18
<b>Total</b>	<b>121</b>	<b>70</b>	<b>47</b>

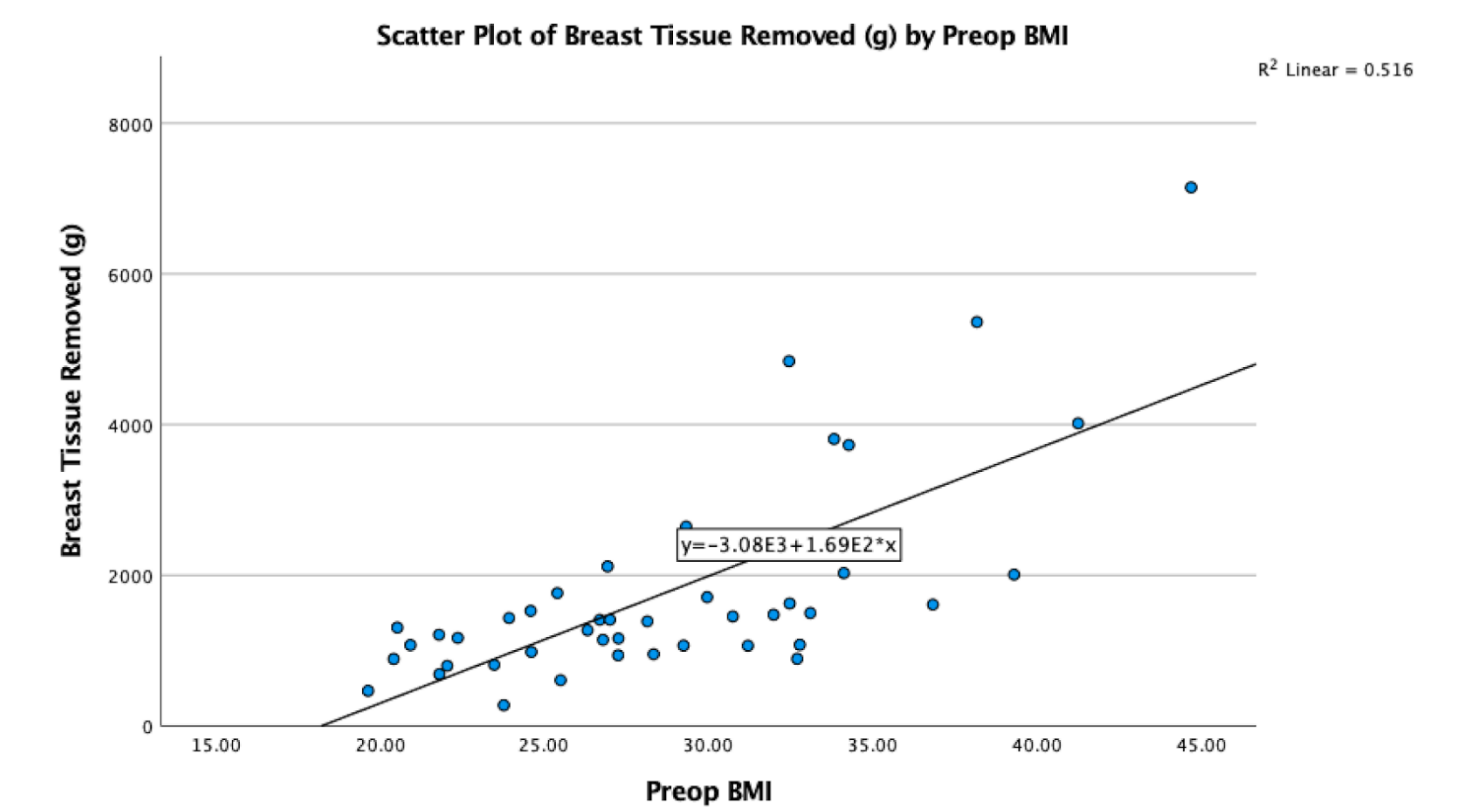
**Table 1.** Number of patients per age group at times of diagnosis, referral to pediatric plastic surgeon, and breast reduction.

Age at Diagnosis (years)	Breast Reduction Completed?		p-value
	Yes	No	
12-14	6	0	0.200
15-17	30	17	
18-20	11	6	
<b>Total</b>	<b>47</b>	<b>23</b>	

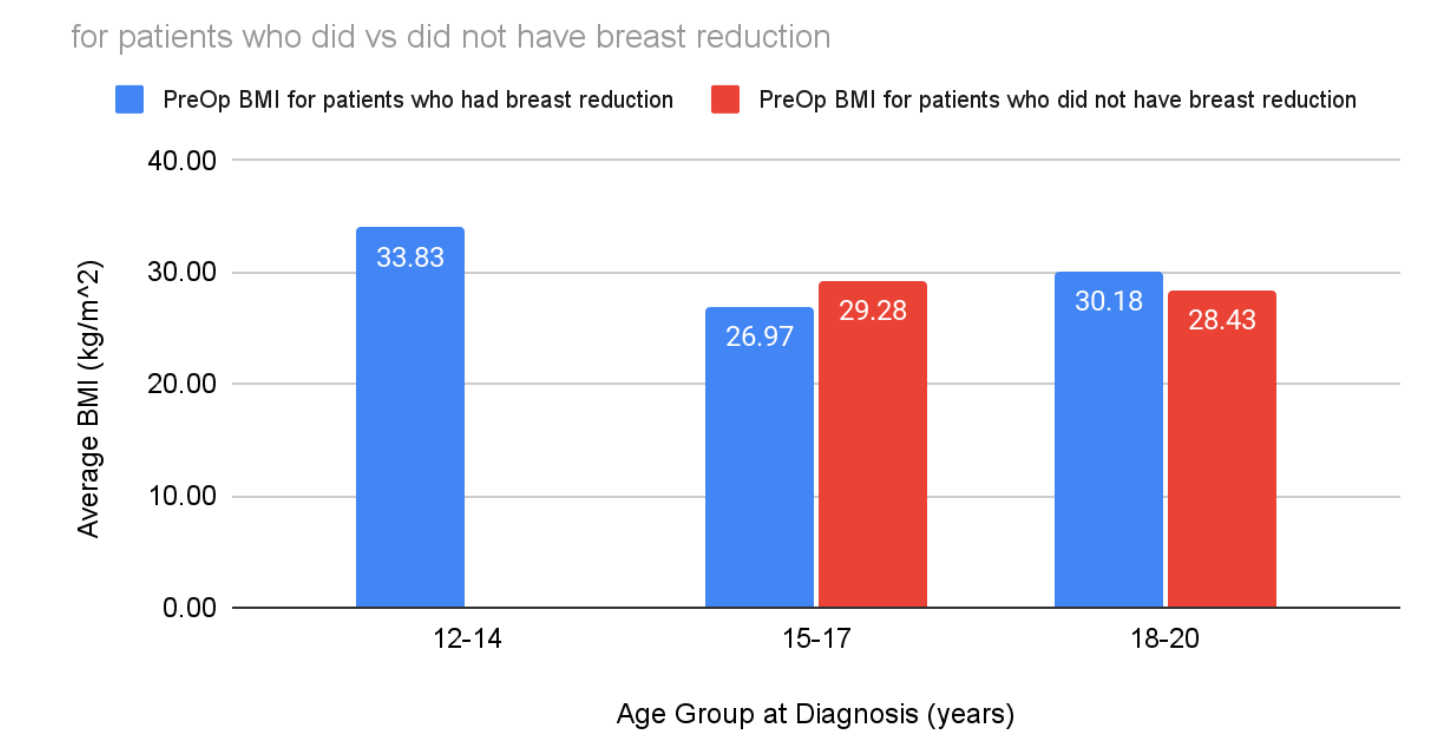
**Table 2.** Distribution of patients undergoing breast reduction by age group at time of diagnosis.

Insurance Class at Time of Diagnosis	Breast Reduction done?		p-value
	Yes	No	
Blue Cross	19	7	0.403
Commercial	5	4	
Managed Care	1	3	
Medicaid	5	1	
Medicaid Managed Care	8	3	
Medicaid Replacement	9	5	
<b>Total</b>	<b>47</b>	<b>23</b>	

**Table 3.** Distribution of patients undergoing breast reduction by insurance class at time of diagnosis.



**Figure 1.** Scatter Plot of Amount of Breast Tissue Removed (g) based on Preoperative BMI (kg/m<sup>2</sup>) (p < 0.001).



**Figure 2.** Preoperative BMI (kg/m<sup>2</sup>) for patients who did (blue) vs. did not (red) have breast reduction by age groups (age group 15-17 years: p = 0.099; age group 18-20 years: p = 0.241)

## CONCLUSIONS

Age and insurance carrier at diagnosis do not appear to play a role in breast reduction in our single institution study. This data suggests that one need not delay breast reduction in symptomatic patients who present at an earlier age based on presumed insurance denial.