

# The Impact of Mesh Weight on Chronic Pain After Open Inguinal Hernia Repair: A Comparative Analysis

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# Disclosures

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# Background

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- Chronic post-operative inguinal pain (CPIP) is prevalent (10-30%)
- HerniaSurge guidelines recommend light-weight mesh (<50 g/m<sup>2</sup>) for open inguinal hernia repair to decrease CPIP and foreign body sensation<sup>1</sup>
- Surgeons use all types of mesh weights

# Aim

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Compare how mesh weight impacts CPIP for open inguinal hernia repair

# Methods

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## Retrospective review of the ACHQC Database

### Inclusion criteria

- Age  $\geq$  18
- Elective
- Non-recurrent
- Lichtenstein repair
- Unilateral
- Clean case
- Baseline and 6-month EuraHS QoL patient reported outcome data

# Definitions

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## Mesh Weights

- LWM <40 g/m<sup>2</sup>
- MWM 40-80 g/m<sup>2</sup>
- HWM >80 g/m<sup>2</sup>

## Chronic Pain

- EuraHS pain score  $\geq 3$  at 6 months

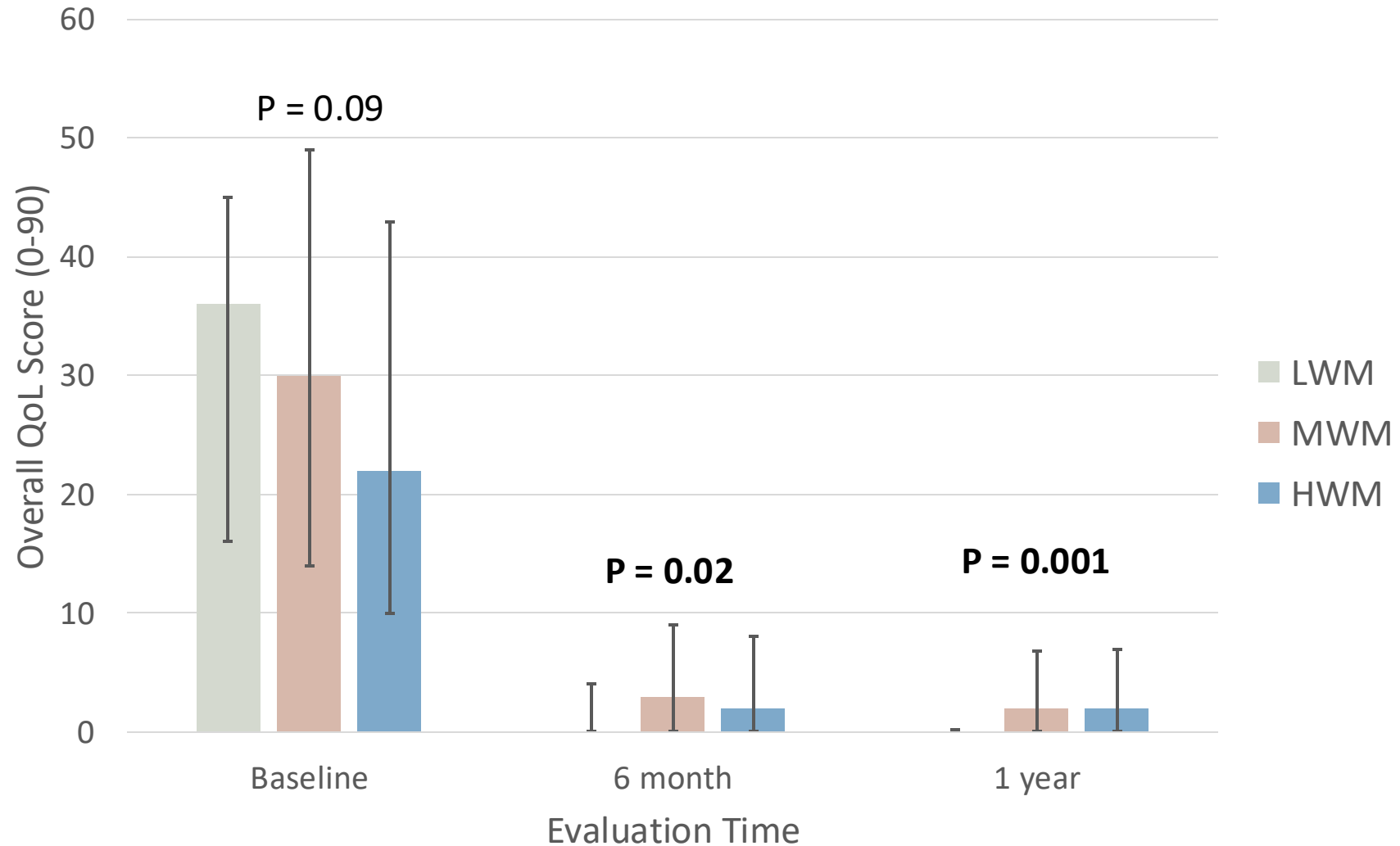
Minimum clinically important difference (MCID)<sup>2</sup>

- Pain  $\geq 3$

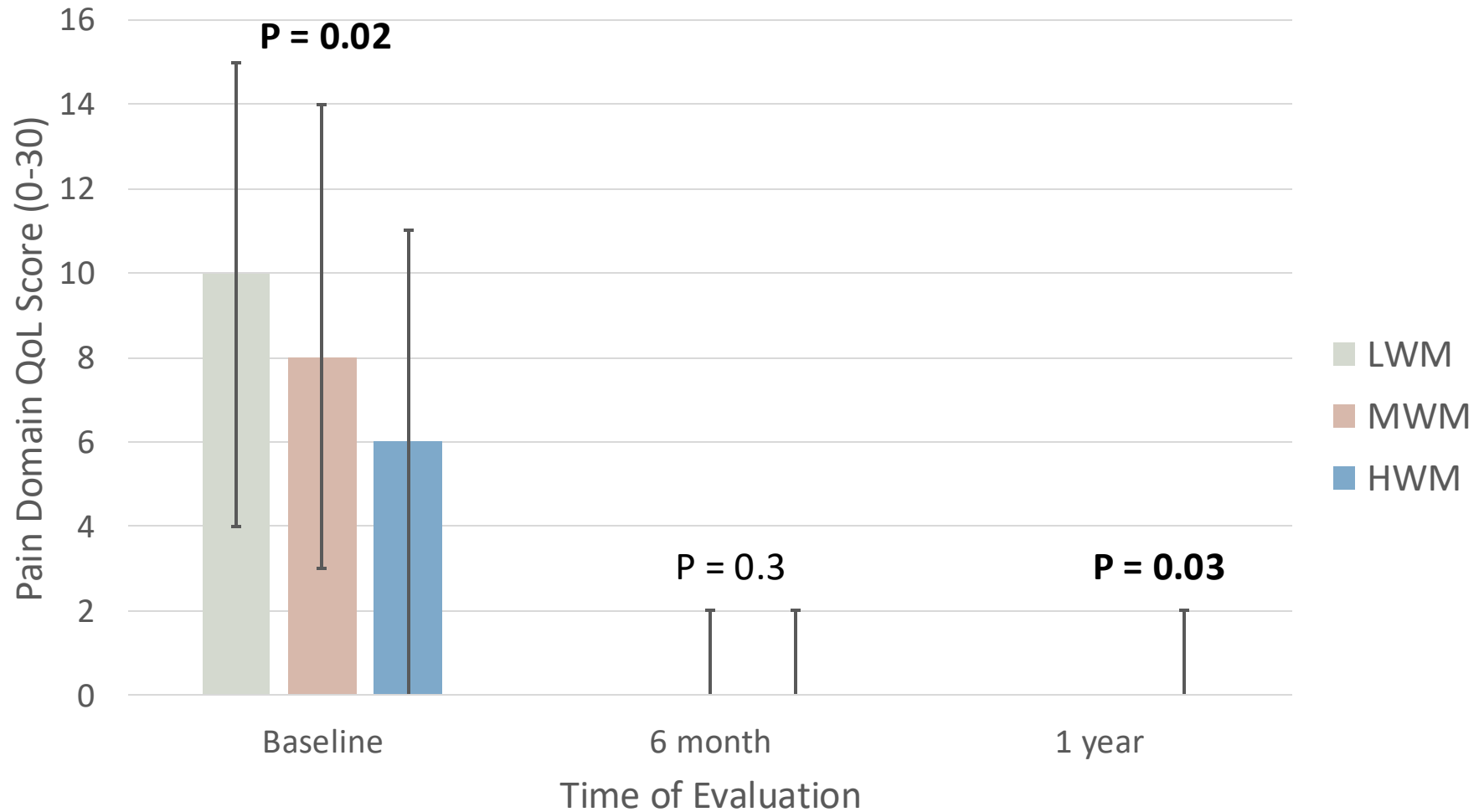
# Results - Demographics

<b>N=319</b>	<b>LWM (n=53)</b>	<b>MWM (n=122)</b>	<b>HWM (n=144)</b>	<b>p-value</b>
Age (years)	66 (58-72)	68 (60-76)	68 (62-74)	0.5
Gender				1
Male	48 (91%)	111 (91%)	132 (92%)	
Female	5 (9%)	11 (9%)	12 (8%)	
BMI (kg/m <sup>2</sup> )	26 (23-31)	26 (24-29)	26 (24-29)	0.3
ASA				<b>0.03</b>
1	3 (6%)	12 (10%)	28 (19%)	
2	24 (45%)	56 (46%)	72 (50%)	
3	25 (47%)	49 (40%)	39 (27%)	
4	1 (2%)	5 (4%)	5 (3%)	
Comorbidities				
Hypertension	26 (49%)	55 (45%)	72 (50%)	0.7
Diabetes	9 (17%)	9 (7%)	7 (10%)	0.07
COPD	1 (2%)	5 (4%)	5 (3%)	0.8
Smoking	7 (13%)	7 (6%)	4 (3%)	<b>0.02</b>

# Results – Overall EuraHS QoL



# Results – Pain Domain



# Results – Pain Domain

Rates of Chronic Pain

	n	LWM	MWM	HWM	p-value
6 months	319	11/53 (21%)	26/122 (21%)	28/144 (19%)	0.93
1 year	156	1/32 (3%)	8/45 (18%)	18/79 (23%)	<b>0.045</b>

EuraHS  $\geq 3$

# Results – Pain Domain

Change of Group Medians from Baseline

	<b>n</b>	<b>LWM</b>	<b>MWM</b>	<b>HWM</b>	<b>p-value</b>
6 months	319	8 (3-15)	6 (2-11)	4 (0-10)	<b>0.02</b>
1 year	156	13 (6-15)	5 (2-10)	4 (0-10)	<b>&lt;0.001</b>

MCID  $\geq 3$

# Results – Recurrences

Clinical	LWM	MWM	HWM	P-value
6 months	0/3 (0%)	1/10 (10%)	0/26 (0%)	0.2
1 year	2/4 (50%)	0/8 (0%)	0/17 (0%)	<b>0.001</b>

Patient Reported	LWM	MWM	HWM	P-value
6 months	5/43 (12%)	7/106 (7%)	13/128 (10%)	0.5
1 year	3/32 (9%)	2/26 (4%)	5/79 (6%)	0.7

# Summary

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- All groups have decreased pain at 6 months and 1 year
- At 6 months, 20% rate of chronic pain regardless of mesh weight
- At 1 year, chronic groin pain is 3% for LWM vs 20% for MWM and HWM
- Despite HerniaSurge guidelines, most surgeons using heavy-weight mesh

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