

# Radial Digit Amputation: An Assessment of Utility Outcomes



UNIVERSITY OF MANITOBA

Ali Izadpanah MDCM MSc<sup>1</sup>, Joshua Vorstenbosch PhD<sup>1</sup>, Arash Izadpanah MDCM<sup>2</sup>, Tassos Dionisopoulos MD FRCSC<sup>1</sup>, Bernard Lee MD FACS<sup>3</sup>, Samuel Lin MD FACS<sup>3</sup>, Hani Sinno MDCM MEng<sup>1</sup>

1: Division of Plastic and Reconstructive Surgery, McGill University 2: Division of Plastic and Reconstructive Surgery, University of Manitoba 3: Division of Plastic and Reconstructive Surgery, Harvard University



## Comparison of Health States

	VAS	TTO	SG
Breast Hypoplasia	0.89	0.93	0.93
Erectile Dysfunction	0.71	0.89	0.94
Aging Neck post MWL	0.89	0.94	0.95
Body Contouring following MWL	0.79	0.89	0.89
Severe Breast Hypertrophy	0.70	0.85	0.88
Cleft Lip and Palate	0.69	0.85	0.84
Monocular Blindness	0.67	0.86	0.84
Binocular Blindness	0.38	0.70	0.66
Severe facial disfigurement	0.46	0.68	0.66

## Background

Radial digit amputation causes significant morbidity and psychological distress in affected individuals, resulting in a severely impaired quality of life. Utility outcome scores are becoming increasingly common as a means to objectively quantify health related quality of life. In the current study, we measured the utility scores associated with radial digit amputation to quantify its effect on health related quality of life.

## Utility Measures

Quantitative and objective measure of a health state preference (or value) Score from 0 (death) to 1 (perfect health). This Allows us to make quantitative comparisons between many health states which could have a potential impact on resource allocation for treatment and research. There are validated tools to determine a utility score including ; Standard Gamble ,Time Trade-Off, and Visual Analogue Scale (VAS)

## Materials and Methods

Using scores were measured using the time trade-off (TTO), visual analogue scale (VAS), and standard gamble (SG) tests in radial digit amputation, monocular blindness, and binocular blindness in prospective participants recruited using Craigslist and McGill Classifieds. Utility scores were compared using paired t-test. Linear regression analysis was performed using gender, race, income, and education as independent predictors of utility.

## Mean Utility Scores

Utility Score	Monocular	Binocular	Radial Digit Amputation	p
VAS	0.63±0.14	0.37±0.17	0.73±0.15	<0.001
TTO	0.86±0.14	0.69±0.22	0.89±0.17	<0.001
SG	0.89±0.13	0.74±0.23	0.93±0.10	<0.001

\* The scores for severe radial digit amputation were significantly different and lower than for monocular blindness

\* TTO : willingness to sacrifice 3.9 years of life

\* SG : willingness to undergo a procedure with 7% chance of mortality

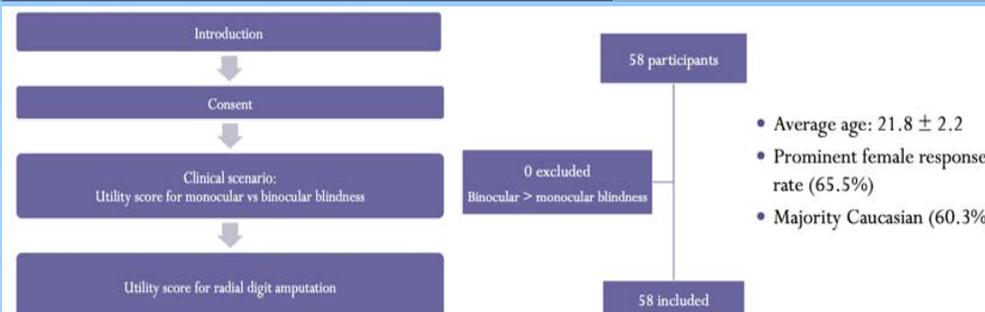
## Conclusion

Burden of living with radial digit amputation is comparable to monocular blindness and other pathological states in plastics (cleft lip and palate, facial disfigurement) that are recognized as a cause of significant functional impairment. Our sample population, if faced with radial digit amputation, is willing to sacrifice 3.9 years of life and to undertake a procedure with a 7% chance of mortality to attain perfect health. This study can help us establish decisions on allocation of financial resources for health care. Further psychological and ethical studies are recommended.

## Aim of Study

The aim of study is to:

To identify and compare the health state utility assessment of living with radial digit amputation compared to other known diagnosis or disease states in plastic surgery



## References:

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