

# Distribution of the Palmaris Longus Muscle

SFM Anatomy Course 2011

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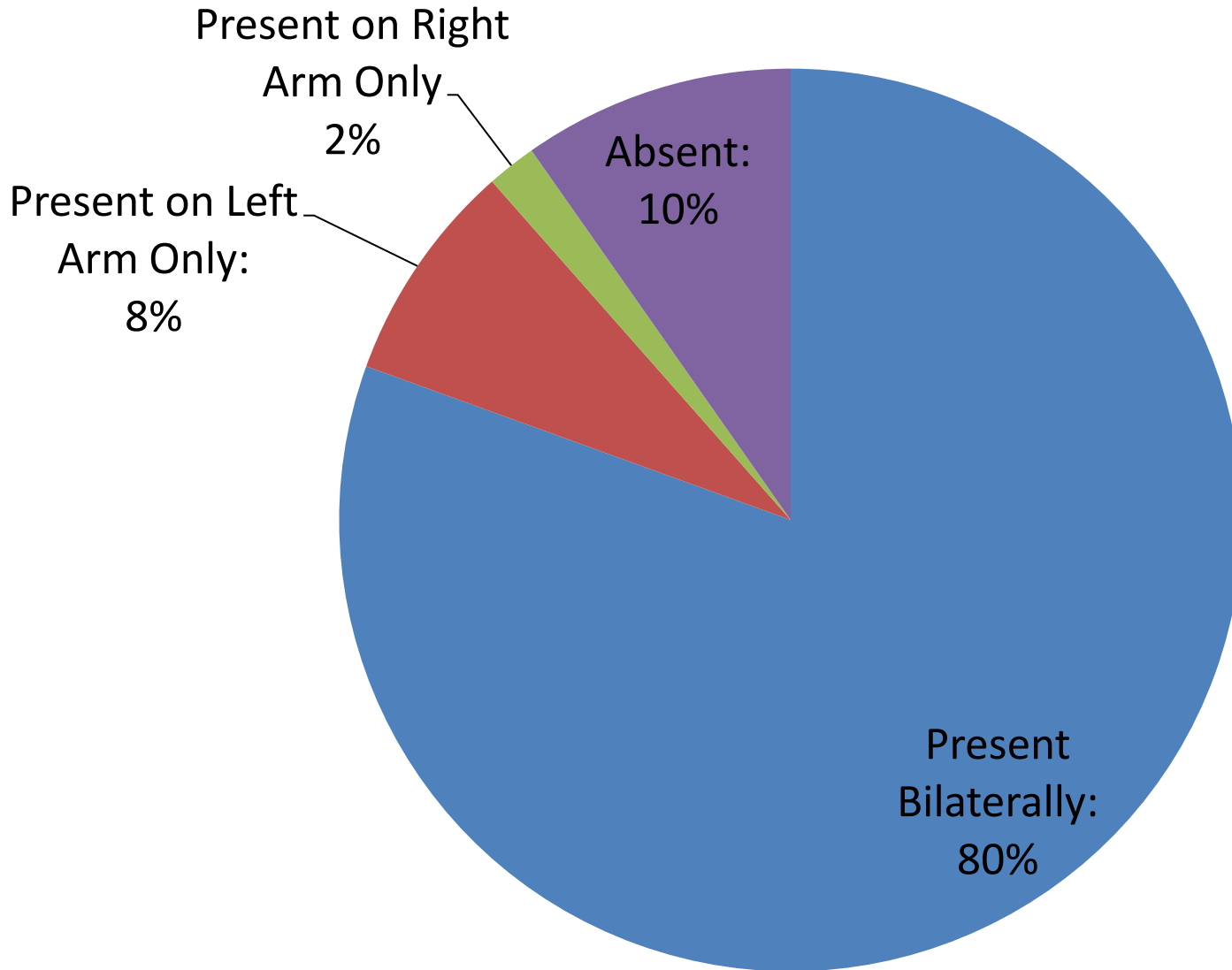


# Financial Disclosures

SG reports nontrivial earnings from the  
Association of Palmaris Longus Enthusiasts  
(APLE)

# Overall Class Distribution

(n = 113)



## Statistics

$\chi^2$  Test Comparing Expected  
1, Grays (Population) Versus  
Observed (Anatomy Class)  
Bilateral Presence:

## Overall

E: 85.0%

O: 80.0%

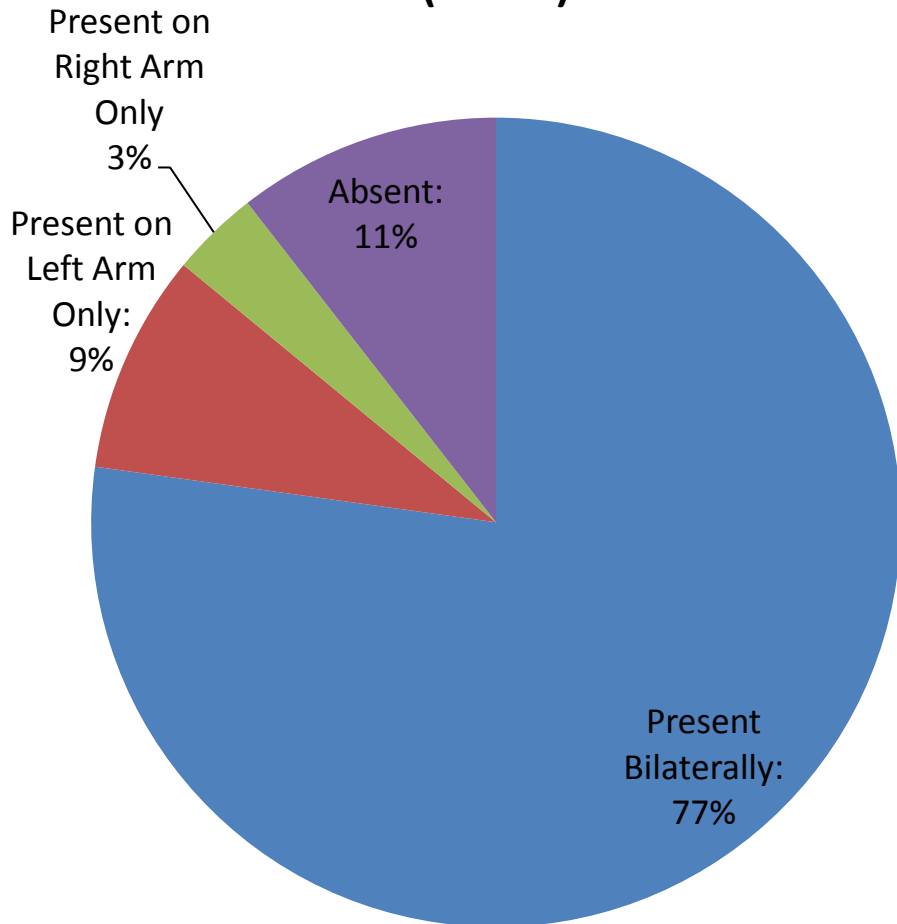
P = .183, ns

Note: small sample size so Chi Square Test is not robust.

# Gender Distribution

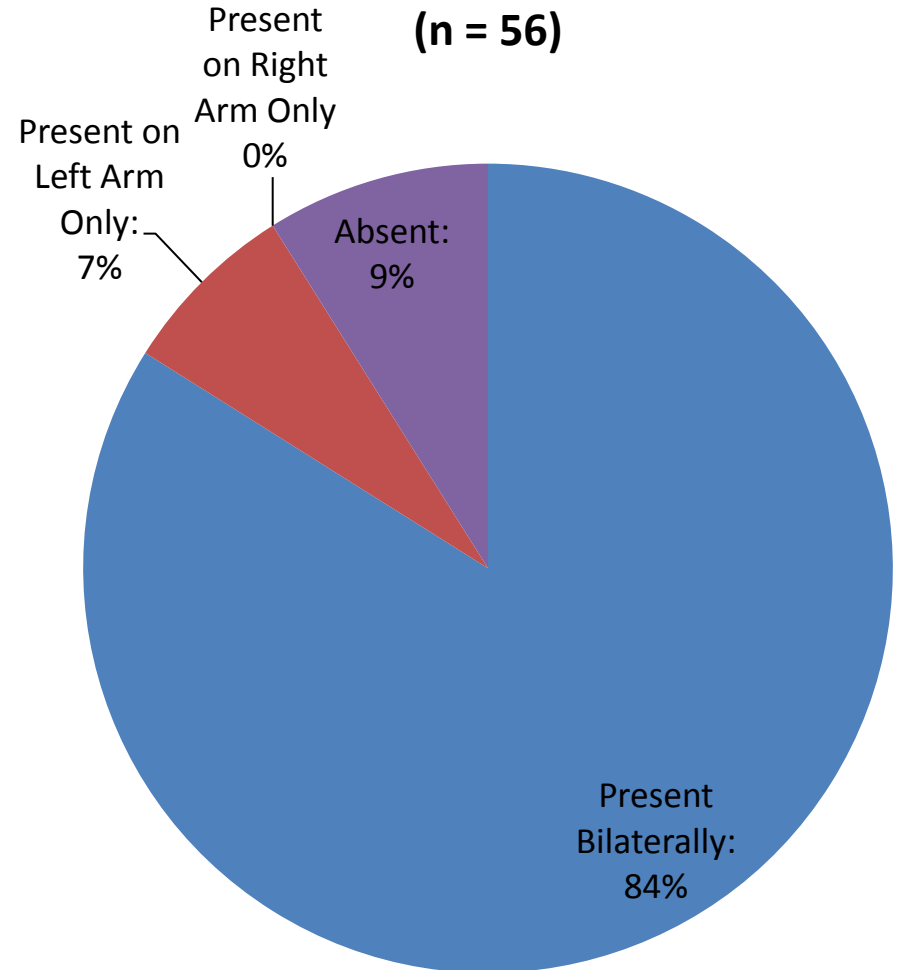
## Males

(n = 57)



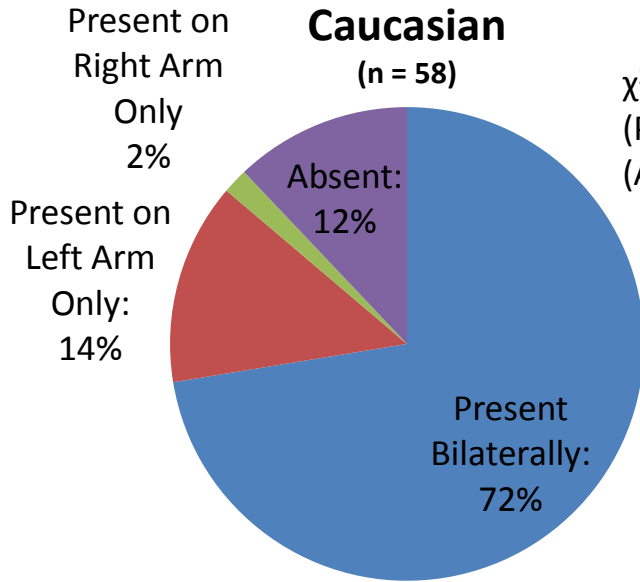
## Females

(n = 56)



Not a statistically significant difference

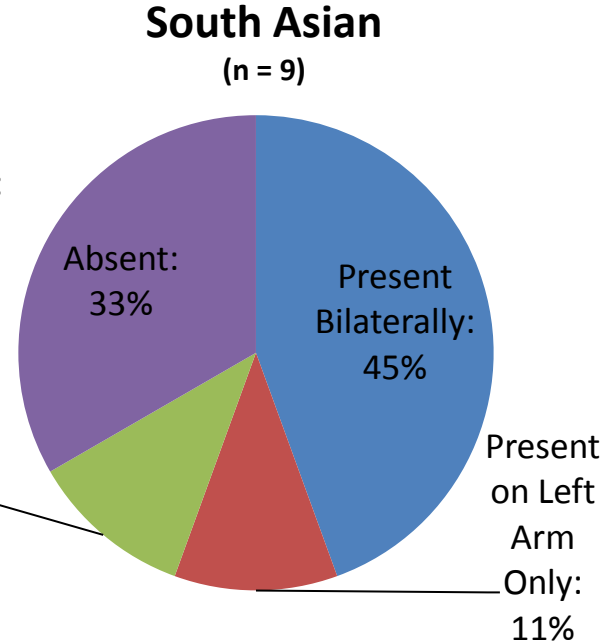
# Ethnic Group Distribution



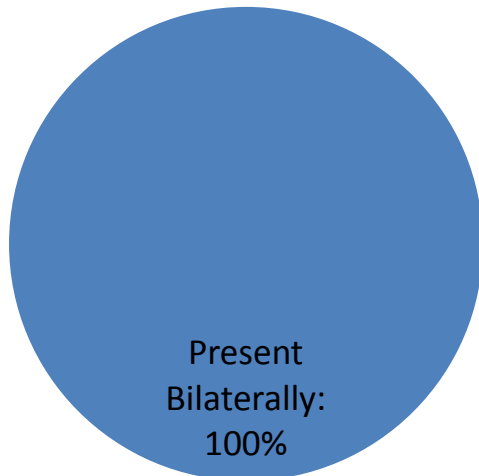
**Statistics**  
 $\chi^2$  Tests Comparing Expected <sup>1, 2</sup>  
 (Population) Versus Observed  
 (Anatomy Class) Bilateral Presence:

Caucasian  
 E: 78.0%  
 O: 72.0%  
 P = .300, ns

South Asian  
 E: 80.0%  
 O: 45.0%  
 P = .008,  
**significant**

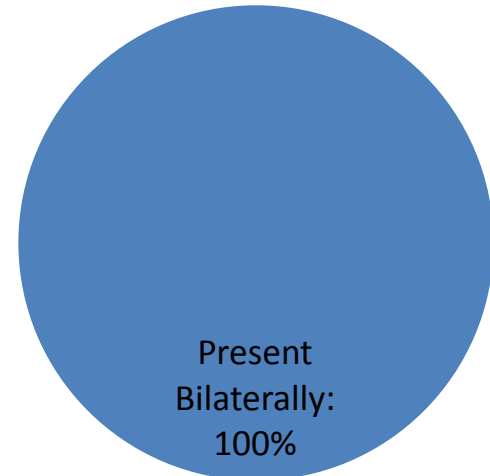


**Black (or African American)**  
(n = 9)



Black  
 E: 97.0%  
 O: 100%  
 P = .600, ns

**Asian (East, Pacific Islander)**  
(n = 31)



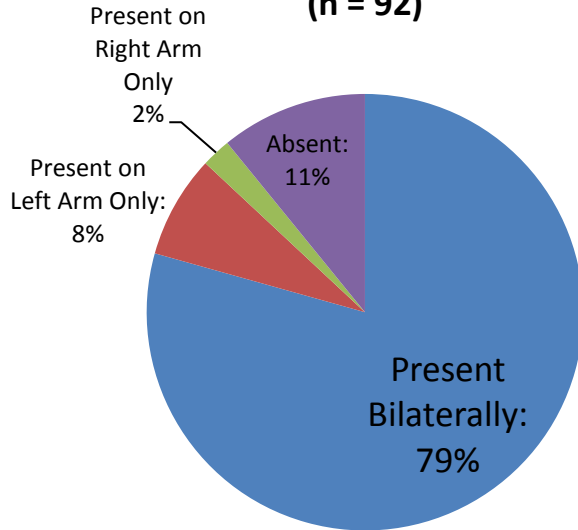
Asian  
 E: 95.5%  
 O: 100%  
 P = .224, ns

Ethnic Groups  
 (small n):  
 Ashkenazi  
 Jew (1, A);  
 Hispanic (2,  
 PB); Middle  
 Eastern (1,  
 PB), Mix (1,  
 PB); Turkish  
 (1, PB)

# Degree Program Distribution

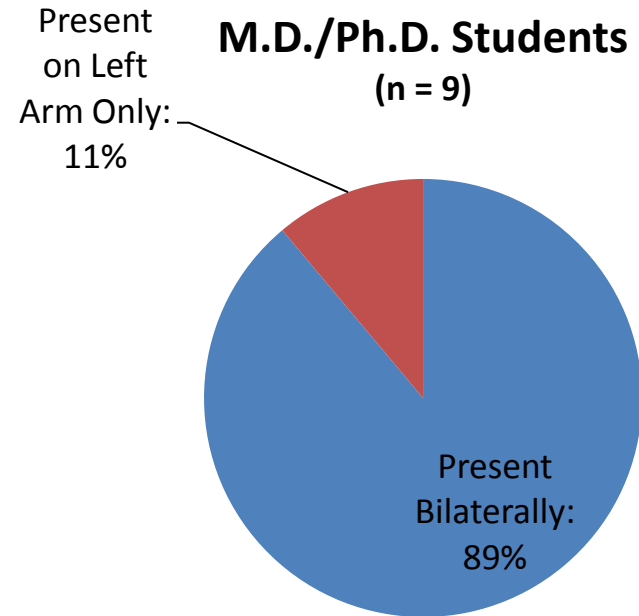
## M.D. Students

(n = 92)



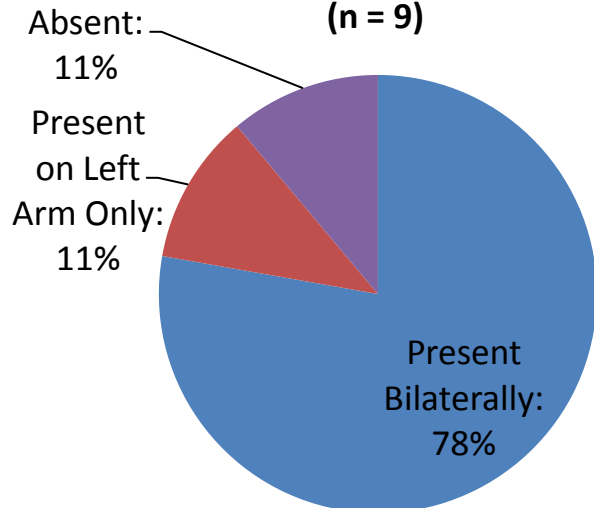
## M.D./Ph.D. Students

(n = 9)



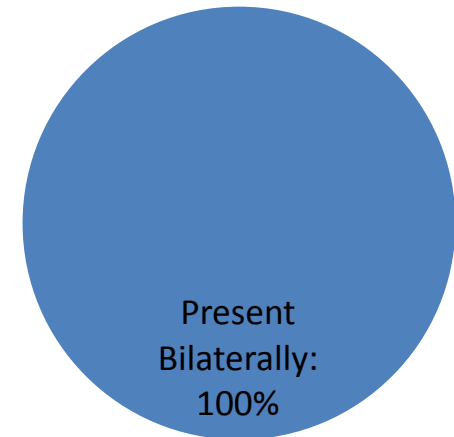
## Ph.D. Students

(n = 9)



## MedArt Students

(n = 3)



# Relevance

Palmaris Longus is a weak flexor of the wrist and elbow, tensor of the palmar aponeurosis, and potentially abductor of thumb ([Gangata et al, 2010](#))

Presence of PL may be associated with higher risk of carpal tunnel ([Keese et al, 2006](#)).

- Or not ([Saied & Karamoozian, 2009](#)).

PL tendon has been harvested as graft to:

- replace extensor tendons in patients with rheumatoid arthritis ([Chu et al, 2008](#))
- treat bilateral facial competency and oral incompetence in patients with muscular dystrophy ([Laina & Orlando 2009](#))
- reconstruct the glans penis in a patient who had a penectomy ([Salgado et al, 2009](#))

# References

1. Sebastin SJ, et al. (2005) The Prevalence of Absence of the Palmaris Longus – A Study in a Chinese Population and a Review of the Literature. *Journal of Hand Surgery* 5: 525-527. [Link](#)
2. Agarwal P (2010) Absence of the Palmaris Longus Tendon in Indian Population. *Indian Journal of Orthopaedics* 44: 212-215. [Link](#)
3. [Additional Reading](#)

Thank you for completing the survey!