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# Demographic Trends and Complication Rates in Arthroscopic Elbow Surgery

NL Leong, JR Cohen, E Lord, JC Wang, DR McAllister, and  
FA Petrigliano

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# Background

- Elbow arthroscopy has become increasingly common since its advent in the 1980s
- Other than case series, limited information available regarding complication rates
- Purpose: investigate demographic trends and the rate of complications requiring reoperation in elbow arthroscopy patients

# Methods

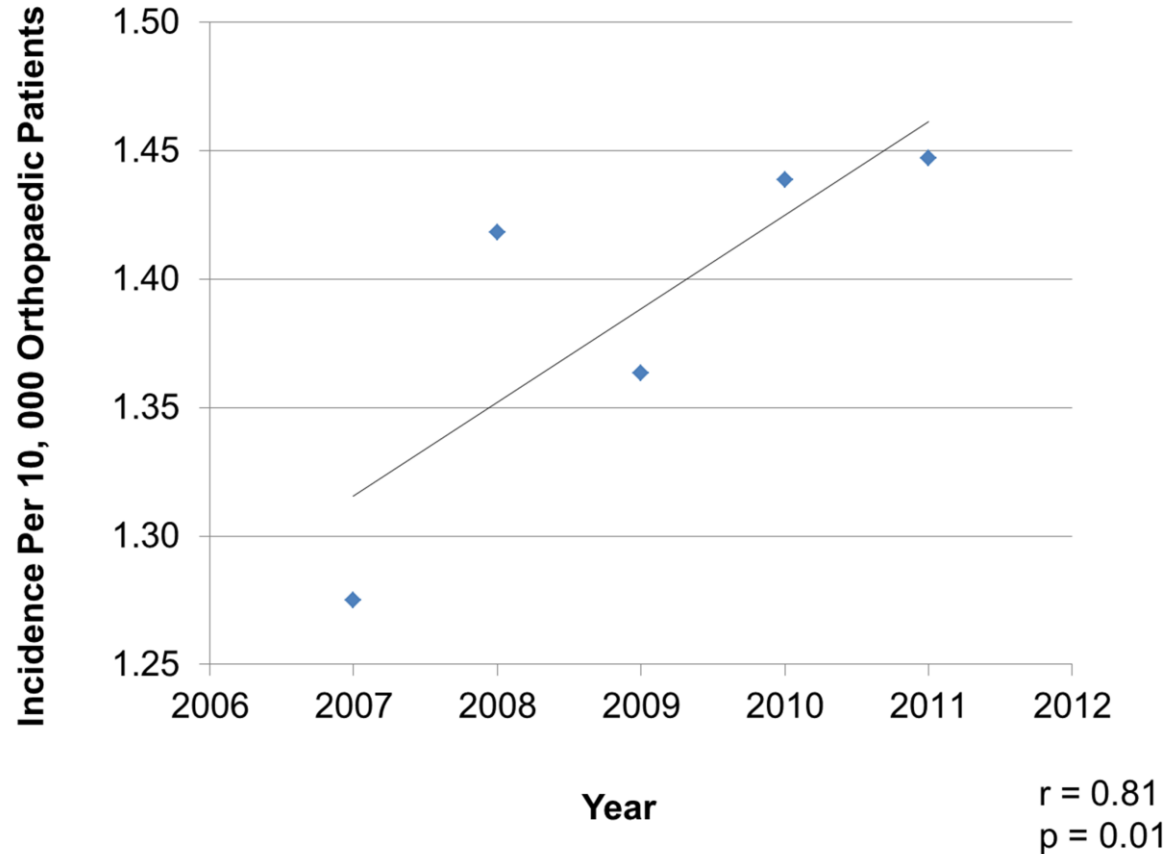


- Large private insurance database searched for CPT codes (2007-2011)
- 20 million orthopaedic records in database
- Age, gender, geographic region
- Complications
  - Infection within 30 days
  - Stiffness within 90 days
  - Nerve operation within 180 days

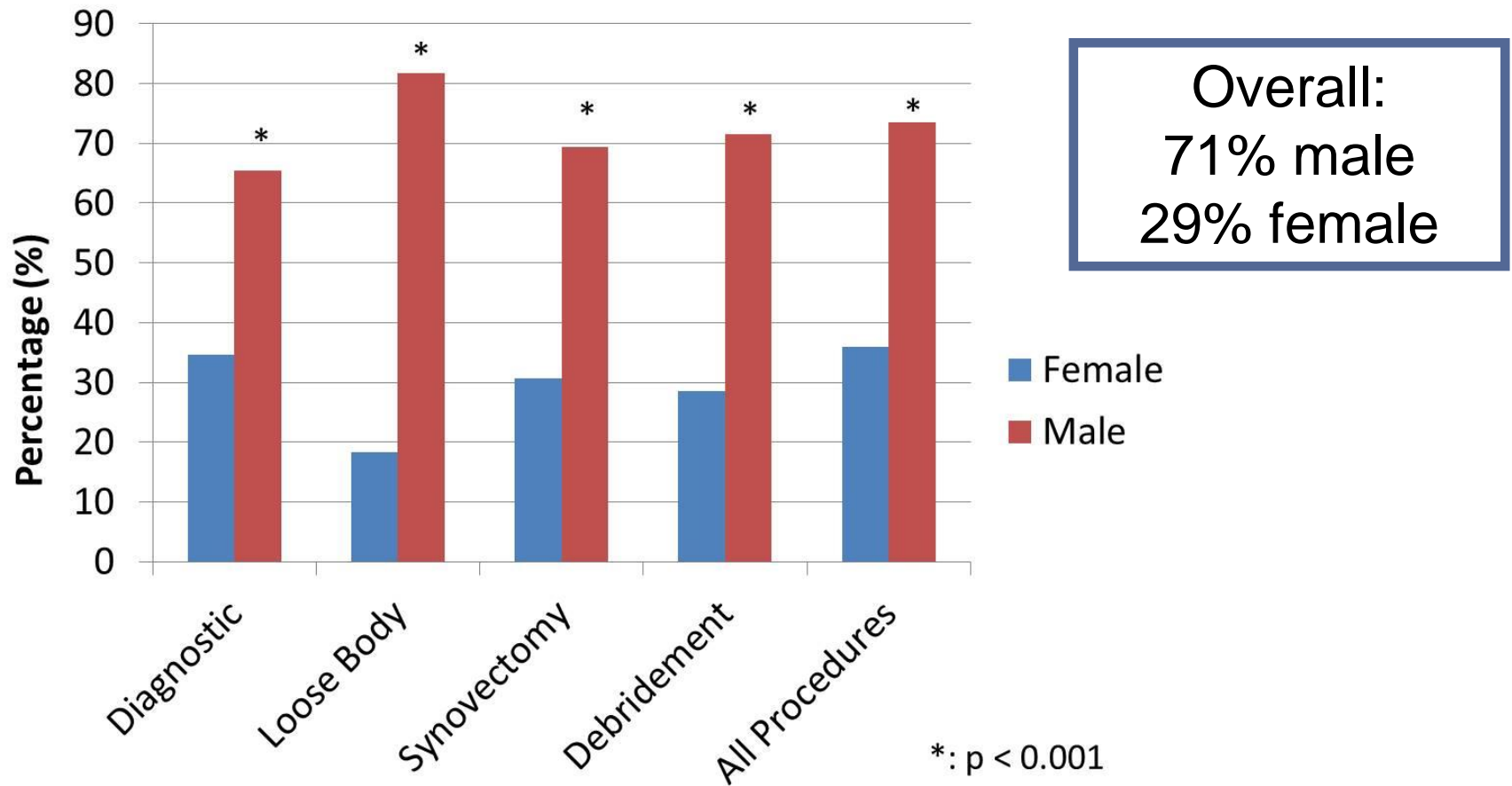
# Methods: CPT Codes Searched

CPT code	Paper description of CPT code	Definition of CPT code
29830	Diagnostic	Arthroscopy elbow diagnostic with or without synovial biopsy (separate procedure)
29834	Loose body	Arthroscopy elbow surgical; with removal of loose body or foreign body
29835	Synovectomy	Arthroscopy elbow surgical; synovectomy partial
29836		Arthroscopy elbow surgical; synovectomy complete
29837	Debridement	Arthroscopy elbow surgical; debridement limited
29838		Arthroscopy elbow surgical; debridement extensive

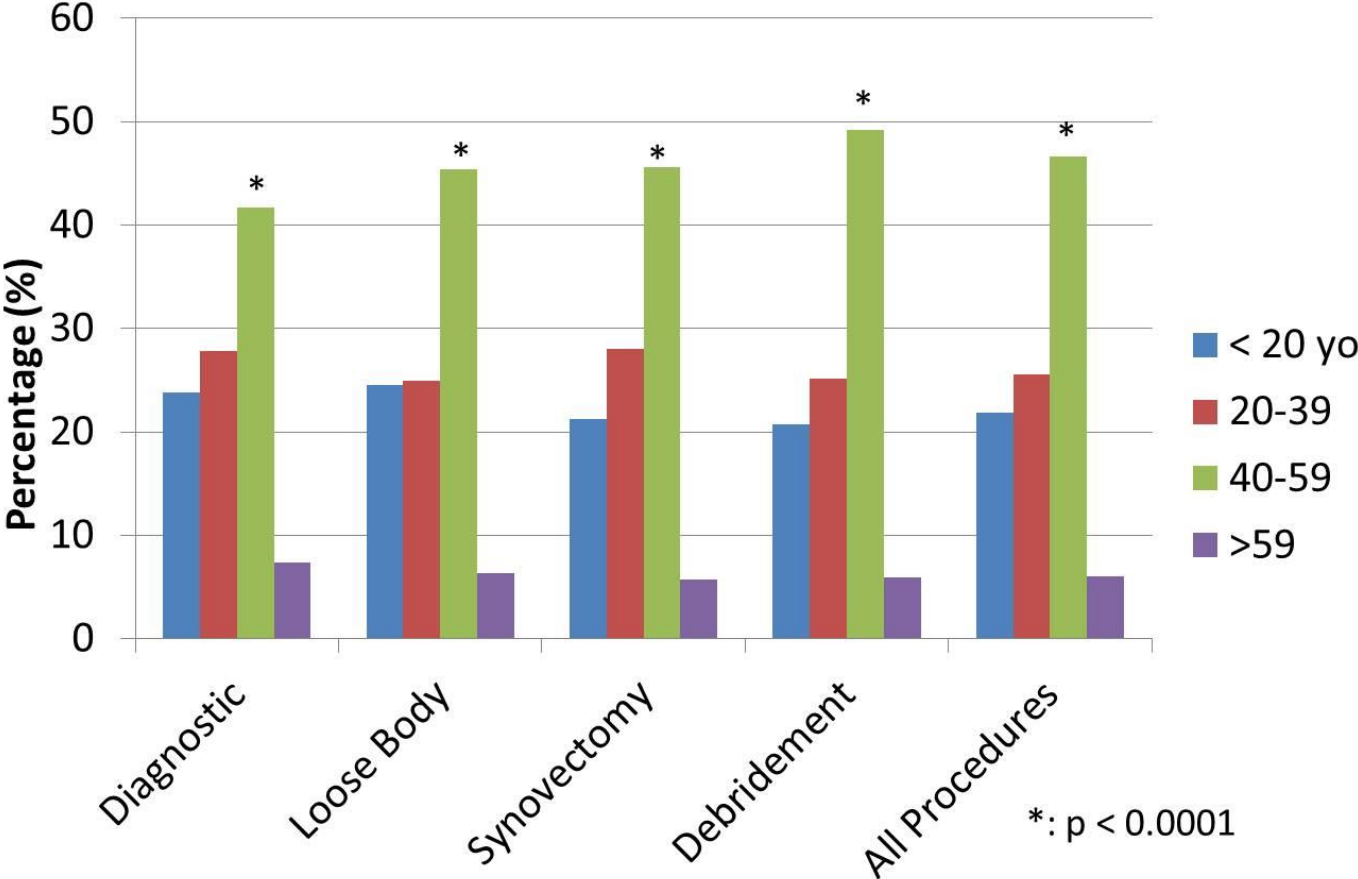
# Incidence of Elbow Arthroscopy Over Time



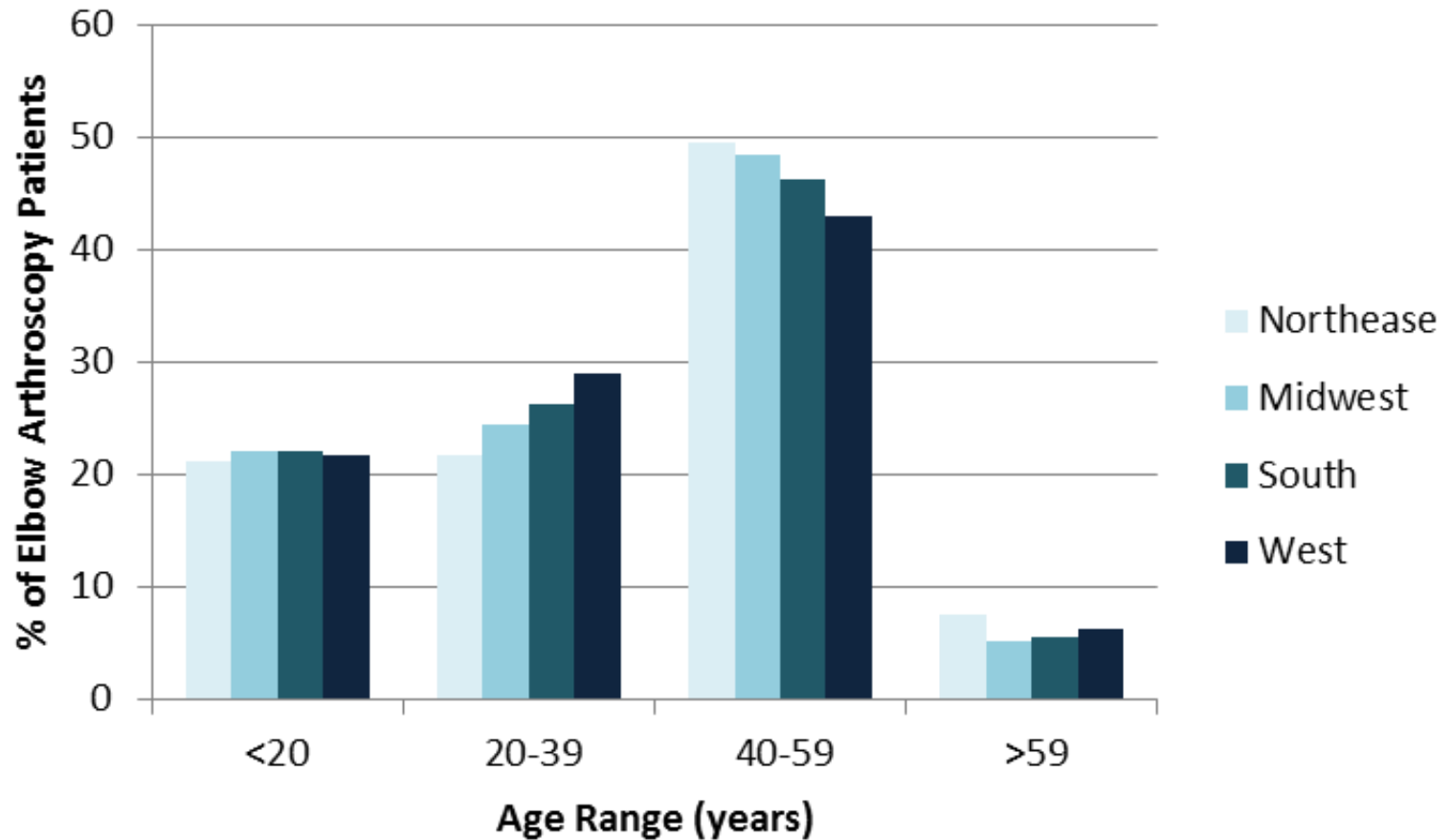
# Distribution of Procedures by Gender



# Distribution of Patients by Age and Procedure

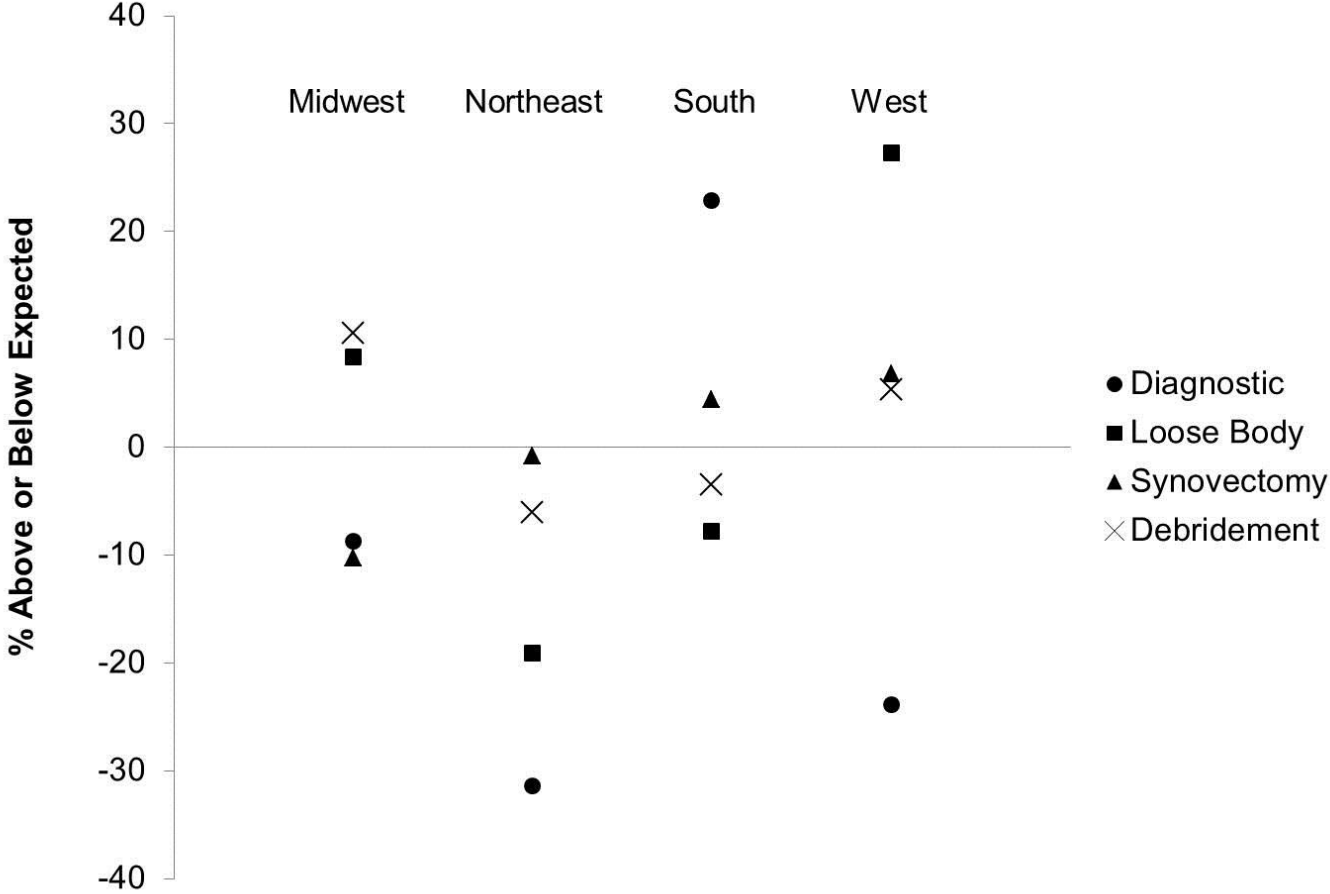


# Distribution of Procedures by Age and Region





# Observed vs. Expected Incidence of Procedures



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# Complication Rates Requiring Re-operation

- Overall: 2.2%
  - Infection 0.26%
  - Stiffness 0.63%
  - Nerve Injury 1.26%

# Discussion

- Elbow arthroscopy incidence increasing over time
- Most common in middle aged males
- Some geographic variation in procedure incidence
- Complication rate requiring reoperation 2.2%
  - Case series reporting 0-4.8%
  - Infection rate (0.26%) comparable to database studies of knee (0.15%) and shoulder (0.27%)

# Discussion

## • Limitations

- Patients may not represent entire population
- Cannot obtain individual patient information
- Unrelated procedures may be included in complication rate
- Cannot make conclusions about complications managed conservatively

## • Benefits

- Over 6,000 records of elbow arthroscopy patients included
- Largest study of elbow arthroscopy to date
- May provide baseline for counseling patients preoperatively

**UCLA** Health