Correlation of Sarcopenia and Functional Performance Factors in Hong Kong Chinese Geriatric Ambulatory Patients with Hip Fracture

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DEXA
(gold standard)
Male: < 7.0kg/m²
Female: < 5.4kg/m²

Low Muscle Mass

Sarcopenia

Predictor of fall-related injuries

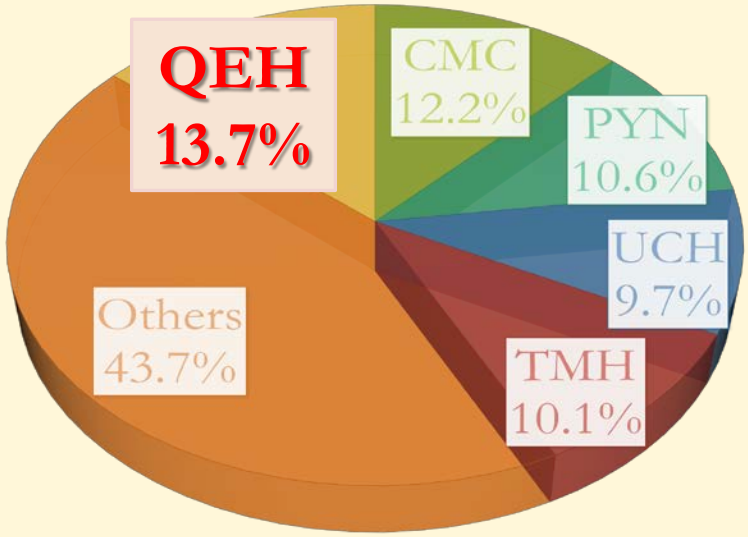
Low Muscle Strength

Low Physical Performance

Handgrip strength
by JAMAR
Male: <26kgf; Female: <18kgf

Gait speed
≤ 0.8m/s

Percentage of headcount of admission to Hospital Authority with hip fracture in the past 5 years



To investigate the correlation of sarcopenia and different physical-performance factors

Methodology

Ethical approval was obtained from the KCC/ KEC Research Ethics Committee/ Institutional Review Board

Retrospective Study

Muscle Mass

RASM (Relative appendicular skeletal muscle mass index) measured by **DEXA** (Dual-energy X-ray absorptiometry)
(within 1 month of admission)

Pearson's correlation
Spearman correlation

Muscle Strength

HGS (Handgrip strength) of dominant and non-dominant side
(within 2 days of admission)

Physical Performance

NMS (New mobility score)
MFAC (Modified functional ambulation classification)
MBI (Modified barthel index)
(within 2 days of admission)

Data Analysis

Prevalence of Sarcopenia: Criteria by Asian Working Group for Sarcopenia

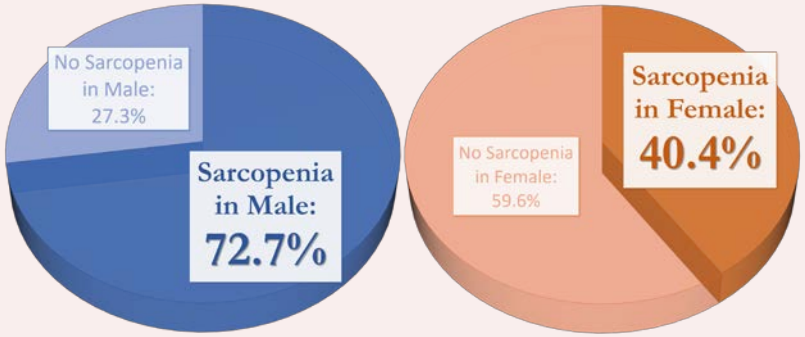
Results

n = 175

Mean age: 82.7±7.3 years

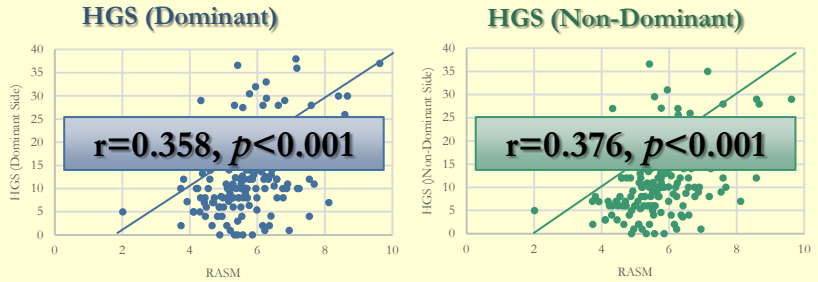
66 males, 109 females

Prevalence of Sarcopenia in Male and Female Patients with Hip Fracture

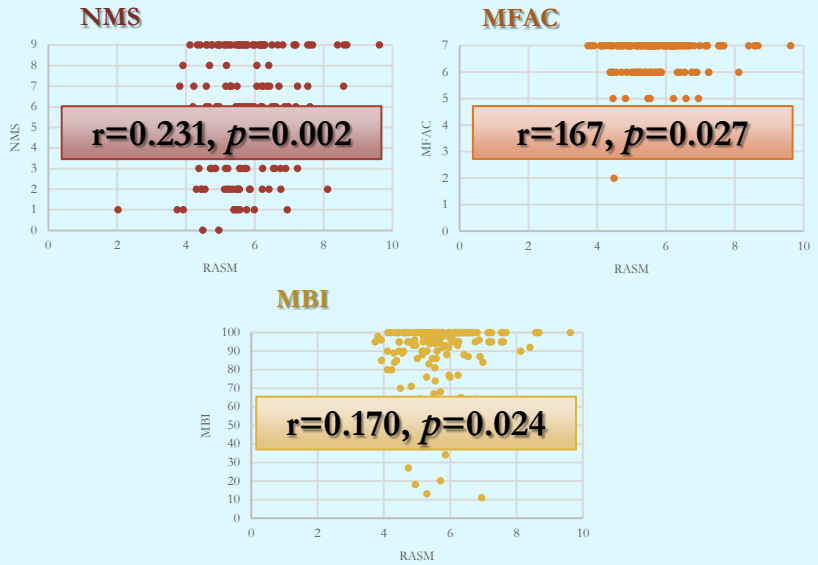


Correlation of RASM and different physical factors

Moderate Relationship



Weak Relationship



RASM is positively correlated with **HGS, NMS, MFAC, MBI**

Discussion

Medical Social Collaboration
「醫社合作」

Subsequent Fall Prevention

Shortening of DEXA Waiting Time

Conclusion

Prevalence of sarcopenia in patients with hip fracture is **high**

Muscle mass (by DEXA) is positively
correlated with HGS, NMS, MFAC & MBI

HGS & NMS can be **easily administered** clinically with
low cost & used as **potential screening tools for sarcopenia**
in geriatric patients with hip fracture

There is potential **Medical Social Collaboration** for skill transfer
to community partnership to provide extension of care