

INTRODUCTION

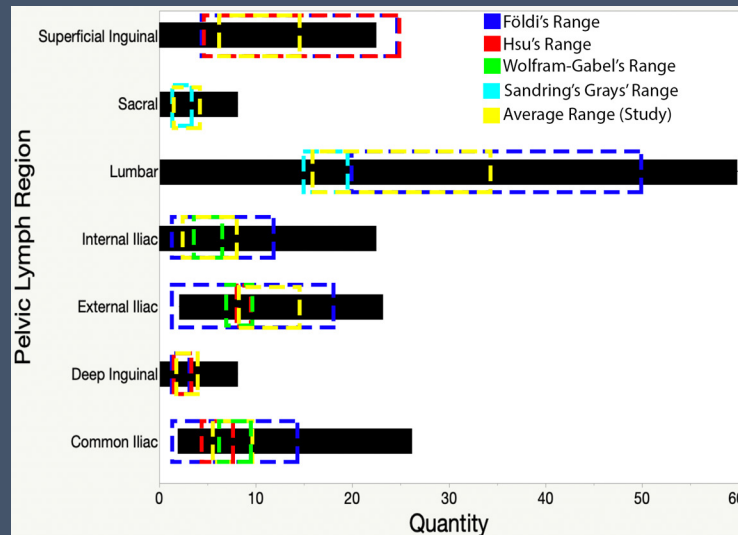
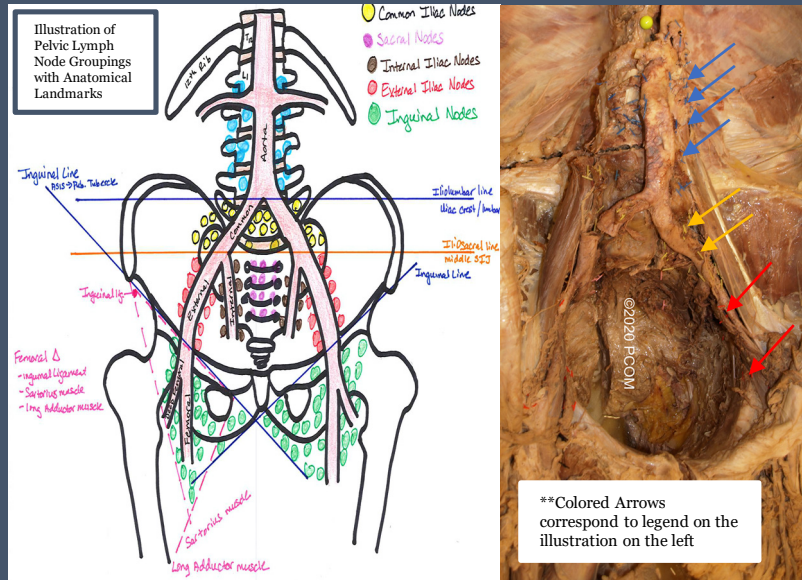
Lymphedema commonly develops as a result of cancer treatments, including surgical removal of lymph nodes or lymphadenectomy. Research suggests there are 500-800 lymph nodes throughout the body. Deciding how many lymph nodes to remove and predicting possible severity of damage to the body can become problematic when the range of lymph nodes in one anatomical area can vary by 30 nodes depending on which source consulted. The purpose of this study was to investigate ranges of pelvic lymph nodes within cadaver samples to lend more research to producing concise ranges per anatomical grouping in the body.

DESCRIPTION

Quantitative analysis was performed on the lumbar, common iliac, internal iliac, external iliac, sacral, deep inguinal, and superficial inguinal anatomical regions of the 43 cadavers. The analysis was produced through linear regression and 95% confidence interval models. The results indicated a mean total of nodes of 24 for the lumbar region (20-28 CI range), 8 for common iliac region (6-9 CI range), 6 for internal iliac region (4-7 CI range), 11 for external iliac region (9-12 CI range), 2 for sacral region (2-3 CI range), 3 for deep inguinal region (2-3 CI range), and 10 for the superficial inguinal region (9-11 CI range).

SIGNIFICANCE

Data collected from the cadavers were compared to various sources (Földi, Hsu, Wolfram-Gabel, Sandrig's) in terms of ranges of lymph nodes in their respective regions. Results reveal a new set of ranges found for the various pelvic regions. The results may provide more insight for physicians to use when considering surgical or medical procedures involving the lymph nodes of the pelvic region. While the data was mostly consistent inside of Földi's ranges, the average range found was shown to be a smaller range in all pelvic regions.



The figure shows the entire range found in our study (black bar) and the average range (yellow rectangle). These ranges are compared to various sources shown in their respective colored rectangles.

RESOURCES

Cadavers provided by PCOM were inspected for LN and quantified by number and size (LxW) simultaneously following DO, PT, and PA students' dissections. Demographics were total of 43 cadavers with 27 female, 16 male, 39 Caucasian, 3 African American, and 1 of Asian ethnicity, ranging from 42-102 in age with a mean of 70 with various cause of death. Cadavers (N=43) were inspected for lumbar LN and cadavers (N=86 sides) were inspected for right and left sacral, common, deep and superficial inguinal, and internal and external iliac LN utilizing common anatomical landmarks to identify and label. Statistical analysis was completed excluding cadavers that did not meet lower boundaries of nodes.

REFERENCES

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