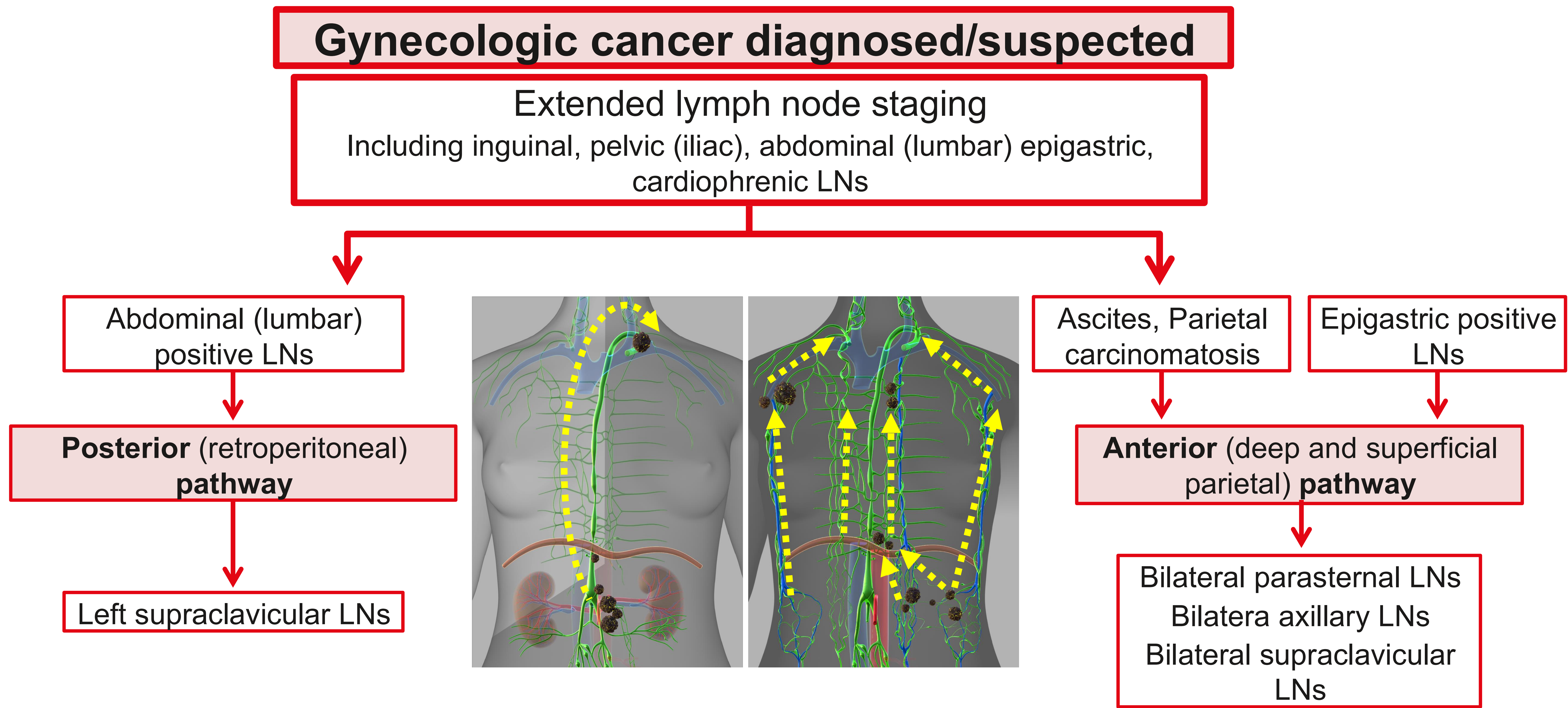


Lymphatic Dissemination Patterns in Gynecologic cancer: An Anatomical-Clinical Review and Ultrasound-Based Applications

Vitcha Poonyakanok, Emma Facchetti, Eleonora Panizzolo, Elisa Farsi, Alessandra Rizzi, Maria Liberata Meccariello, Francesca Filippi, Mariana Beja, Joana Mafra, Giulia Di Caro, Elisa Grassi, Greta Sergenti, Gloria Lalli, Andrea Burgetova, Ondrej Nanka, Daniela Fischerova

Methodology: A systematic literature review, complemented by institutional imaging–pathology correlations, was performed to characterize lymphatic dissemination in **vulvar, vaginal, cervical, endometrial, and ovarian cancers**. Nodal spread was analyzed according to the anterior and posterior lymphatic pathways, incorporating relevant risk factors to define the probability and sequence of nodal involvement, leading to the development of a **practical ultrasound-based staging algorithm**.

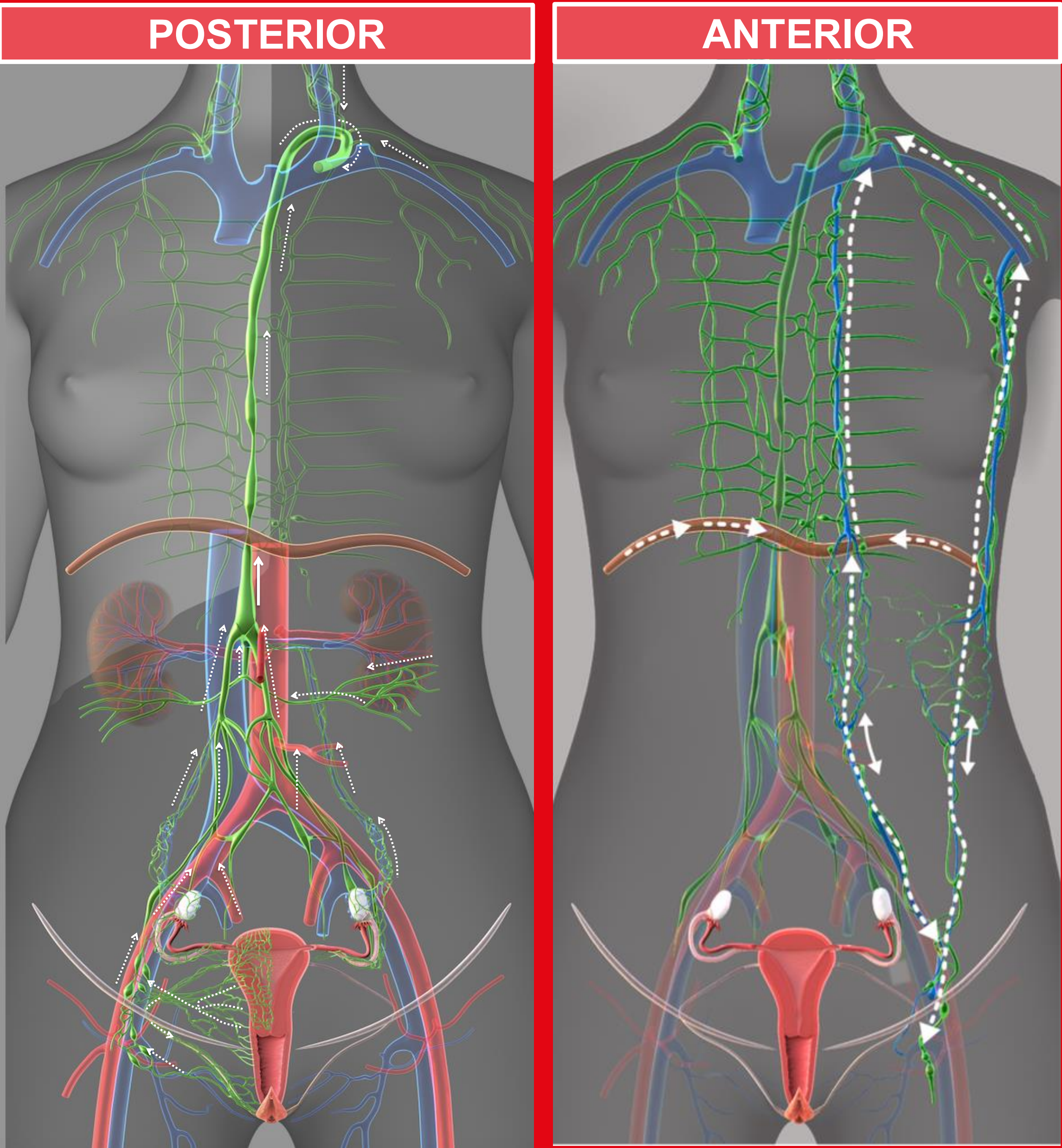
Results:



Conclusions: This study proposes a pathway-oriented framework for understanding lymphatic dissemination in gynecologic cancers. The diagnostic algorithm supports a standardized, mechanistic approach to lymphatic mapping, with the potential to improve staging accuracy and facilitate multidisciplinary collaboration in gynecologic oncology.

What is already known on this topic?

The VITA terminology and the consensus on ultrasound lymph-node assessment have standardized nodal evaluation.



Recently, a dual-pathway anatomical model of lymphatic drainage has been published, organizing lymphatic drainage both anatomically and clinically into a **posterior (retroperitoneal) pathway** and an often overlooked **anterior (deep and superficial parietal) pathway**.