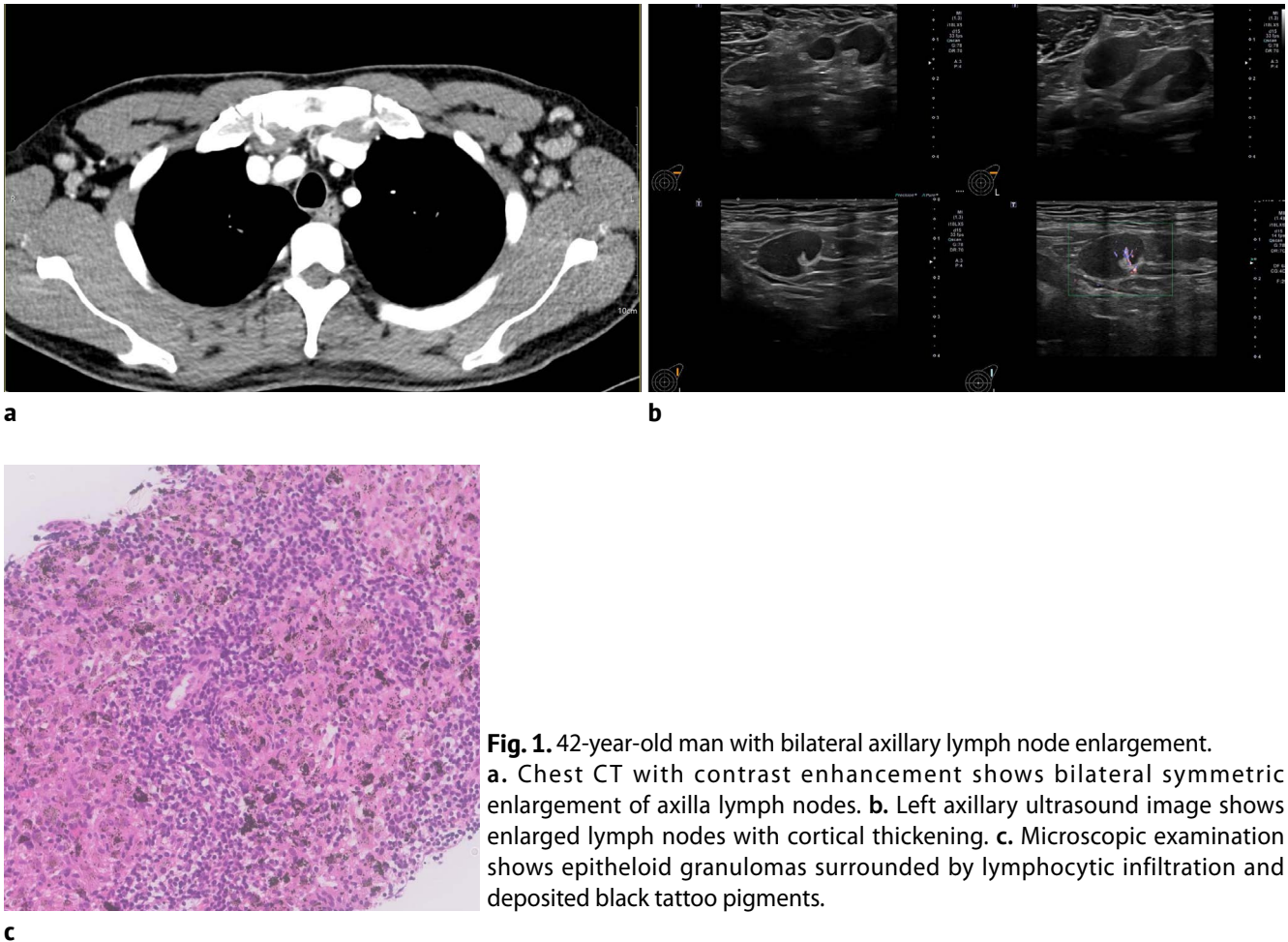


## Tattoo Associated Axillary Lymphadenopathy

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**Fig. 1.** 42-year-old man with bilateral axillary lymph node enlargement. **a.** Chest CT with contrast enhancement shows bilateral symmetric enlargement of axilla lymph nodes. **b.** Left axillary ultrasound image shows enlarged lymph nodes with cortical thickening. **c.** Microscopic examination shows epithelioid granulomas surrounded by lymphocytic infiltration and deposited black tattoo pigments.

A 42-year-old man showed bilateral axillary lymphadenopathy on chest CT (Fig. 1a). He had a booster shot of COVID-19 vaccine three weeks ago. The ultrasound-guided core needle biopsy was performed on the enlarged lymph node at left axilla (Fig. 1b), and all four tissue samples obtained were black like a pencil lead. Huge black-ink tattoo

covered the patient's posterior neck to back and both arms. Microscopically, the nodal architecture was replaced by noncaseating granulomas with black tattoo pigmentation (Fig. 1c). The final pathologic diagnosis was chronic granulomatous inflammation caused by tattoo pigment.

Tattooing involves intradermis deposition of

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pigment with the aid of needles. Then, pigment ingested by macrophages enters the lymphatic channel and migrates to the regional lymph nodes [1]. Tattoo pigment can precipitate many inflammatory conditions. Among them, granulomatous reactions are a rare type of tattoo reaction, often caused by black tattoo ink. It is suggested that tattoo pigment stimulates the immune response as a chronic antigen, causing granulomatous inflammation in the skin, lymph node, and organ [2]. Painless regional lymphadenopathy evoked by tattoo pigment may masquerade as malignant disease such as metastasis or lymphoma. In particular, metastatic melanoma is a major differential diagnosis due to pigmentation,

and it can only be differentiated under a microscope [3].

### References

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