



History of Medicine

Mid-19th century Chinese medical portraits depict late-stage female breast tumours

Art can unexpectedly provide information about medicine and diseases in the past, including cancer. A small number of breast cancer cases have been identified in Renaissance paintings.^{1,2} Here, we report one of the largest pictorial collections of breast tumours recorded by the Chinese painter Lam Qua (aka Kwan Kiu Cheong, 1801–60)³ and dated to the mid-19th century. Lam Qua lived in the Canton province of China (currently Guangzhou) during the last imperial dynasty (Great Qing, 1636–1912). In the 1820s, he studied under the patronage of George Chinnery (1774–1852), the first English painter known to settle in China.³ He became one of the most important Chinese painters who adopted the western style of portraiture and developed a considerable clientele from the western community, within and outside of Asia.³

In the 1830s, Lam Qua met the American medical missionary, Peter Parker (1804–88), a Yale graduate.³ Parker introduced western medical techniques into the Chinese medical world and founded the first western-style hospital in China, the Ophthalmic Hospital (also known as the Canton Pok Tsai Hospital) in Canton.⁴ From 1836, Lam Qua painted an impressive collection of medical portraits commissioned by Parker. The sitters—men, women, and children with tumours at different stages of progression—were patients at the Canton Hospital;³ they were depicted before they underwent surgery.⁵

We analysed 80 paintings from Lam Qua's Collection, which is part of the Peter Parker Collection (box 8, folder 6 [mixed materials]), held by the Harvey Cushing/John Hay Whitney Medical Library at Yale University (New Haven, CT, USA).⁶

11 (37%) late-stage breast tumours (portrait numbers 10, 15, 16, 17, 18, 24, 26, 27, 28, 29, 30) were identified in 30 portraits of adult Chinese women. No evident cases of male breast tumours (46 examined portraits) were found. Several specific clinical features of breast cancer such as multifocal lesions (figure 1; appendix p 1), ulcerated tumours (appendix p 2), nipple retraction (appendix p 3, 4), and skin and nipple ulcerations (appendix p 5) were identified. Based on a morphological macroscopic observation, we propose that Lam Qua also recorded one of the earliest representations of Paget's disease of the breast.⁷ Portrait number 24 (figure 2) displays several signs of this type of cancer—an eczema-like rash in the nipple area and adjacent areolar skin, nipple inversion, and ulceration.

Both the size and types of lesions we identified (ie, ulcerations and multiple lesions) imply that the patients admitted to the hospital and visited by Parker had received a late-stage diagnosis. The reason for these delayed diagnoses can be found by looking at the historical, medical, and cultural background of mid-19th century China.⁸ Despite the presence of public hospitals governed by the Imperial Court's Medical Department, patients preferred to be treated at home, assisted by family members.⁸ It was only in the late 19th century, when western hospitals were built, that a cultural and social shift began that led to more patients being treated in hospital. Nevertheless, women were still reluctant to go to the hospitals.⁸

Lam Qua's medical portrait collection is a notable example of the link that exists between art and medicine. Each sitter is painted with an expressionless

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We declare no competing interests

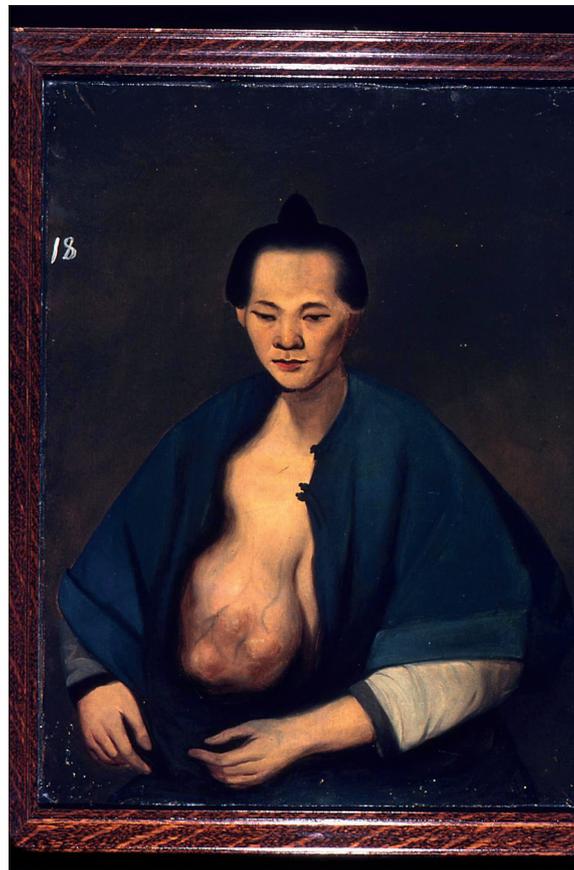
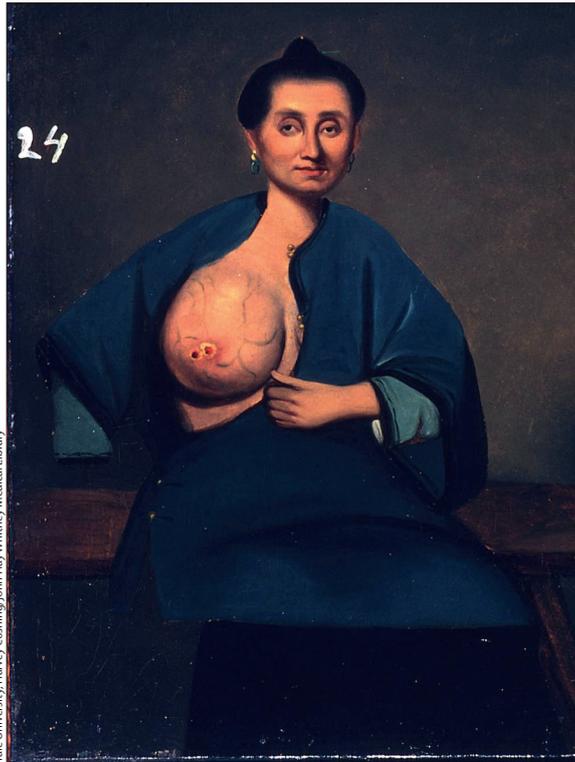


Figure 1: Portrait number 18. Description: Woman seated. A large, malignant tumour is evident on right breast (1830–50). Oil painting, 61 cm × 47 cm

Yale University, Harvey Cushing/John Hay Whitney Medical Library

See Online for appendix



Yale University, Harvey Cushing/John Hay Whitney Medical Library

Figure 2: Portrait number 24 shows a possible case of Paget's disease of the breast (1830-50). Oil painting, 61 cm x 47 cm

look so that the absence of emotion turns the viewer's eye from the individual's face to their disease.³

Thus, the collection provides scholars with indirect information on the epidemiology of breast cancer in mid-19th century China. As breast tumours were identified in 37% of all women portrayed in the portraits of Lam Qua, we propose that in the mid-19th century, breast cancer was a common cancer in Chinese women living in the Canton province (Guangzhou). In 2012, the International Association of Cancer Registries estimated that breast cancer was the most common cancer in Chinese women, with an age standardised rate (ASR) of 21.6 cases per 100 000 women.^{9,10} More specifically, data from the Chinese National Central Cancer Registry showed that breast cancer was the most common tumour among urban women and the fourth most common tumour in rural areas in 2008.^{8,9} A high incidence of breast cancer was found to occur in socioeconomically developed eastern coastal urban areas. An ASR of 46.6 cases per 100 000 women was reported in Guangzhou in 2012, the same area where Lam Qua's patients once lived.⁹ The last release of the GLOBOCAN database (International Association of Cancer Registries, September, 2018)¹⁰ further confirms that breast cancer in Chinese women (19.2% of total cases) is increasing (breast cancer represents 19.2% of all cancer cases in China), and due to the aging and growing population, and the rise in a westernised lifestyle, the burden is expected to rise in years to come.

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