

## La Fornarina does not have breast cancer

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The paper is a critical analysis of "The portrait of breast cancer and Raphael's La Fornarina" published in the *Lancet* in December 2002<sup>1</sup>. This paper stated that Raphael's last painting of his mistress La Fornarina, was pointing to a cancer in her left breast. The author sited her position, the size and shape of the left breast and arm, an irregularity near the left axilla and skin colour discolouration as evidence for breast cancer<sup>1</sup>. This paper analyses the same painting but provides evidence for a different conclusion; that La Fornarina does not have breast cancer.



**Figure 1.** Raphael's *La Fornarina* (1520), oil on panel - 85 X 60 cm. Galleria Nazionale di Arte Antica in Palazzo Barberini.

As many radiotherapists have learnt to their cost, the apex of the heart is deep to the left breast. Margherita, Raphael's model, is pointing to her heart as a token of her love for the artist. The hand or finger resting on the left breast is a classic pose from the times of antiquity much favoured during the Southern Renaissance. Apart from the intrinsic beauty of the pose, there is a significant iconology either by indicating the organ of lactation (mother love, nature's bounty) or the underlying heart (anguish, love). Some examples come readily to mind.

Mother love is exhibited by Parmigianino's "Madonna and Child with Angels" (Madonna of the long neck) in the Uffizi, Florence. Nature's bounty is illustrated by Ruben's great allegory of peace in our National gallery where the milk gushes out of the nipple. Anguish is demonstrated in Masaccio's Eve from his fresco in the Brancacci Chapel, Florence. Finally the love at the time of espousal is gorgeously illuminated by Rembrandt's "The Jewish Bride" in the Reiksmuseum, Amsterdam. Further evidence is provided by the "love band" inscribed with the name Raphael on the left upper arm. The closeness of their relationship is further supported by the evidence that La Fornarina's portrait was found in Raphael's studio after his death.<sup>2,3</sup>

The paper also tries to read too much into the image, which far from being a precise 'photographic' depiction is in fact an idealization of the female form. In 16th Century Italy the ideal female form demonstrated pyramidal shaped breasts set very high on the thorax. Good examples of this can be seen in the work of Raphael's contemporary Piero di Cosimo (the dead nymph in the

mythological scene, National gallery London) and Titian's sacred and profane love in the Borghese gallery, Rome. After puberty the Northern European breast develops a ptosis unless augmented by silicone.

The author also asserts that a puckering of the breast just above the left index finger is evidence of a cancerous mass. However, a simple experiment will demonstrate that if a woman applies gentle pressure with the index finger, just below the left nipple, a linear dimple will appear:



**Figure 2.** A magnified image of the left breast.

The author also sites nine hues coloured black, taupe, amber, grey, purple, blue, cream, pink and brown as evidence for breast cancer related colour changes. However, these are actually the standard colours and techniques used to depict gradations of shadow in 16th Century Italy<sup>4,5</sup>. Espinel also suggests that advanced of the breast leads to blue discoloration of the skin. The available literature does not support this observation and in thirty plus years as a breast surgeon I've never personally observed this phenomenon. Oedema, inflammation (carmine red) and nodularity may be present but blue discoloration is unlikely (unlike the blue dot sign of testicular torsion).

Espinel goes onto suggest that the left breast is enlarged and that the left arm is abnormally swollen due to oedema and inflammation from the adjacent cancerous mass in the left breast. These statements are difficult to support as Margherita is turned a quarter away from the viewer introducing the possibility of parallax error when making estimations regarding size<sup>6</sup>. Indeed the right arm and right breast are not fully in view with the lateral mass of the right breast occluded by the overriding right arm. This conclusion also fails to recognise different body types, arm-body ratios and inter and intra-individual variations with women having different breast sizes and there may be a non-pathogenic size asymmetry between left and right breasts<sup>7</sup>.

Espinel also observes that "just inside the axilla, a slight protuberance suggests a fat pad, or perhaps a lymph node" and thus this provides further evidence to support the diagnosis of advanced breast cancer. This is a clear example of reductionism and conjecture-led determinism as the author moves from vague differences in colour tone and brushwork to a slight protuberance to a fat pad to a lymph node to further support for the diagnosis of breast cancer, moving from one step to the next in this cascade without rigorous analysis is meaningless. One could just as easily state that this is angina or paroxysmal tachycardia.

Furthermore, if La Fornarina possessed such a “protuberance” on the right breast, the argument for pointing to the left breast due to cancer is somewhat diminished, however, as the right breast is not fully in view, one cannot make this assumption.

If an individual was to apply such a superficial thought process to a scientific paper, one would be somewhat concerned. Why should art and history papers not be subjected to the same rigorous methods of evidence-based scholastic analysis? Attempts to diagnose breast cancer from classic paintings is not new but fraught with difficulty, bias and often fail to objective with long extrapolations based on vague shadows and brush strokes. Probably the best attested is Rembrandt’s Bathsheba at her toilet, in the Louvre, which is a “foot of the bed” diagnosis<sup>8</sup>:



**Figure 3.** Rembrandt’s Bathsheba (1660). Meseum de Louvre in Paris.

Even when the artist intends to represent breast cancer he can get it wrong, as in the miracle of San Carlo Borromeo by il Cerano in the Museo del Duomo, Milan. In figure 2, according to Espinel, the “tumour” pushes through the skin as a round convex deformity. Perhaps the proposed mass is a simple cyst? For Espinel to thus state that La Fornarina is the earliest illustration of breast cancer may be a bit premature considering the available evidence. For the moment, Marcus Aurelius Severinus’ 17th Century depiction is the earliest credited report differentiating benign from malignant breast tumours<sup>9</sup>.

Espinel is right though is stating that over the centuries, La Fornarina’s portraight has stirred up controversy and confounded viewers and art experts<sup>2,3,10,11,12</sup>. Some artists believing the work is incomplete, noting the lack of smoothing of the brush work in certain places<sup>2,3</sup>, in which case an artistic analysis is somewhat flawed from the very start. Others state that it is a provocative exposure of flesh and that the body is actually flawed<sup>12</sup>. Whilst still others state that La Fornarina’s form is at odds with the aesthetic ideals of the High Renaissance<sup>3</sup> and the principles which Raphael himself developed and perfected<sup>13</sup>. Espinel has now added to this long history of controversy by stating that La Fornarina has breast cancer

The linkage between surgery, history and art is fascinating, but this subject requires a rigorous, scholastic and evidence-based approach if it is to avoid reductionism and conjecture-led deterministic cascades. More recently, I have been dismayed to see La Fornarina exhibited in the opening slide of two lectures and as the front piece of a scientific programme at International meetings.

**Conflicting Interests** - None declared

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