

## Michelangelo and medicine

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Depictions of pathological conditions in painting and sculpture, and their interpretation, have long fascinated doctors and numerous reviews and observations have been published over the years. The work of the Italian painter, sculptor and poet Michelangelo (1475–1564) has attracted particular attention from physicians. We conducted a Medline search for articles that contained the keyword Michelangelo.



Figure 1 *David*, 1501–1504, Galleria dell'Accademia, Florence

In an early article from 1971, an American urologist raised the subject of circumcision, when commenting on the famous *David* (Figure 1). *David* represents an uncircumcised young man, and the discussion elaborates on whether Michelangelo's decision to portray his subject in all his intact nature may have been influenced by local church leaders at the time; that is, a circumcised *David* might have been politically incorrect<sup>1</sup>. Other urologists promptly joined in the discussion, suggesting alternative explanations—such as a joke by the artist<sup>2</sup>, or an alleged lack of interest in precise anatomical detail. Support for this latter argument came from a different commentary, pointing to the presence of blood-filled arm veins in the crucified Christ in the statue *Pieta*; seemingly Michelangelo was unaware of the existence of venous valves<sup>3</sup>.

With regard to circumcision, however, the true explanation is probably much simpler: although circumcision was widely practised, in renaissance art it was customary not to admit to the effects of the operation. This is most obvious in the numerous contemporary representations of the Christ Child, who is never shown as circumcised<sup>4</sup> although circumcision was mandatory in Judaism. Further discussion about the anatomical accuracy of Michelangelo's sculptures has arisen also with regard to his statues *Notte* and *Aurora*, two of the four *Phases of the day* in the Medici family tombs in Florence. In the statue *Notte* (Figure 2) the shape of the breasts is perceived to be unnatural<sup>5</sup>, and possible explanations are that Michelangelo was unfamiliar with the female body<sup>6</sup> or that he based the sculpture on a male model with subsequent addition of female-sized breasts<sup>7</sup>; others have remarked that the figure's thighs, neck and shoulders are more male than female. Ensuing commentaries included the adventurous explanation that Michelangelo, reputed to have been homosexual, resented female features and deliberately created a male with added breasts<sup>8</sup>. However, a more recent interpretation offers a morbid explanation—namely, that the left breast has features of locally advanced cancer.

The notion that Michelangelo was ignorant of female anatomy is not convincing. He started dissecting human bodies when aged 18, and many of these dissections took place in the Monastery of Santo Spirito in Florence where the corpses often originated from associated hospitals<sup>10</sup>. It is therefore likely that Michelangelo was familiar not only with the anatomy of the female body but also with its



Figure 2 *Notte*, partial view of the tomb of Giuliano de' Medici, 1526–1531, Florence

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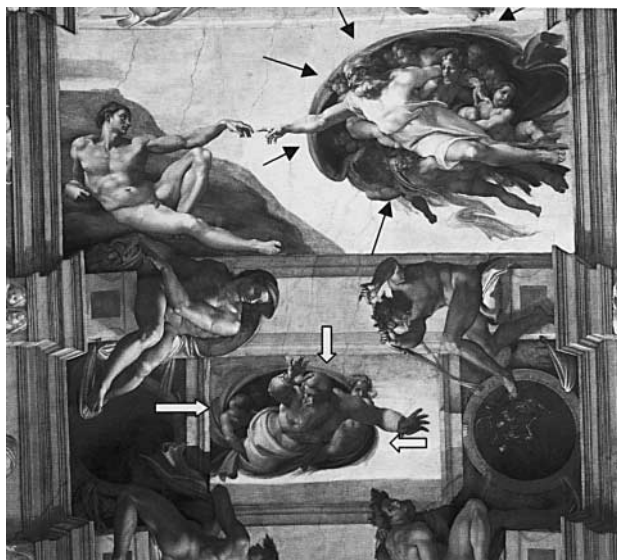


Figure 3 Partial view of the frescos in the Sistine Chapel, Vatican. Open arrows point to kidney shape; solid arrows to brain shape

pathology. Of interest is also the fact that an almost identical appearance of the breast to the one discussed in the statue *Notte* can be seen in *The Flood*, a scene in the frescos of the Sistine Chapel in the Vatican, painted around 20 years before creation of the statue *Notte*.

An American renal physician reckoned to have found convincing evidence that Michelangelo was familiar with the anatomy and function of the kidneys<sup>11</sup>. According to Eknayan, the artist's interest in the kidney started when he became afflicted with urolithiasis and sought help from the most prominent physician in Rome, Realdo Colombo<sup>12</sup>. In the painting *The Separation of Land and Water* on the ceiling of the Sistine Chapel, the mantle of the creator resembles a bisected right kidney<sup>11</sup> (Figure 3); furthermore, use of this shape in a painting that represents the separation of land and water strongly suggested to Eknayan that Michelangelo was well aware of the anatomy and function of the kidney (as understood at the time). In a letter to his nephew in which he complains about recurrent joint pains, Michelangelo mentions that he has been diagnosed as having gout<sup>13</sup>. Nephrologists, of course, may be especially apt to see kidney shapes. Similarly neurologists: previously an American neuroanatomist had noted that, in Michelangelo's fresco the *Creation of Adam*, also in the Sistine Chapel, the image surrounding God and the angels had the shape of a human brain<sup>14</sup> (see Figure 3). According to Meshberger this was an encoded message from Michelangelo, signifying a belief that the 'divine part' humans receive from God is the intellect, and not life—an interpretation strengthened, in his opinion, by the fact that Adam, moments before his creation, is already alive, with his eyes open and completely formed.

A digression from the theme of medicine in Michelangelo's art concerns the artist's own knee, which

according to Espinel<sup>15</sup> is depicted in a fresco by Raphael. The painting in the Vatican, commissioned by Pope Julius II at a time when Michelangelo was on site completing the ceiling of the Sistine Chapel, shows an individual with an enlarged and deformed right knee. The figure is in contemporary clothes and not, like others in the picture, in more classical dress. The lumps on the knee are interpreted as gouty tophi, in accordance with the artist's purported diagnosis. However, the notion that this person must be Michelangelo was soon refuted<sup>16</sup>.

Lastly, Michelangelo's work has been interpreted in psychiatric terms. An Argentine medical anthropologist found features of melancholy in the painting of the prophet Jeremiah in the Sistine Chapel<sup>17</sup>, and suggested that this portrayed the artist's own melancholy, from which he is said to have suffered for much of his life. Josef of Arimatea, part of the group in the *Pieta* seen at the Duomo in Florence, is likewise said to display features of melancholy<sup>17</sup>. In summary, it seems that Michelangelo's creative depictions of the human body allow for physicians from varied specialties to identify with different aspects of his work. Since art interpretation is subjective, the quest will doubtless continue.

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