

A brief history of a long battle with melanoma

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Man and melanoma (from the greek “melas” meaning dark and “oma” meaning tumour) have had a long and arduous battle tracing all the way back to the 5th century B.C. as outlined in the works of Hippocrates. (Fig 1) The literature on the battle continued with ancient Greek physician Rufus of Ephesus also describing melanoma as well as other medical conditions. (Fig 2)

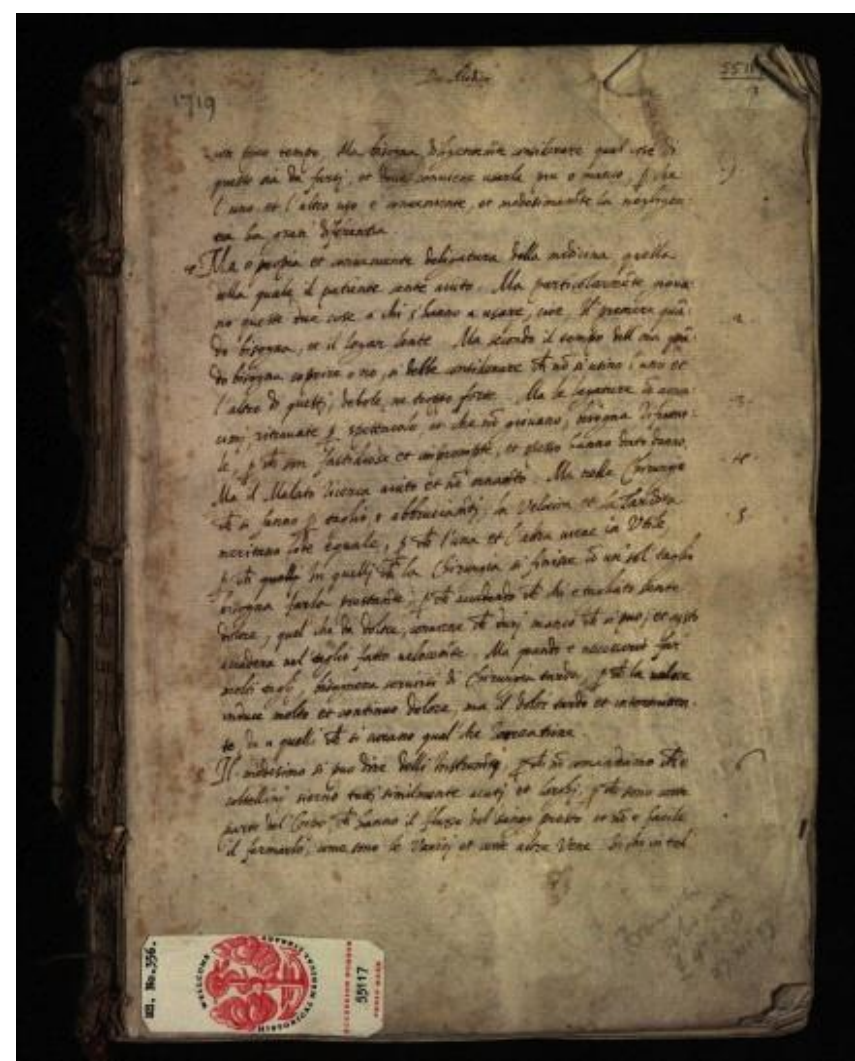


Figure 1: Works of Hippocrates (460-375 B.C.): one of the earliest pieces outlining melanoma. (Wellcome Library, London)



Figure 2: Portrait of Rufus of Ephesus, anatomist, who described melanoma. (Wellcome Library, London)

This rich history has been revealed in archeological evidence, with an interesting study on pre-Columbian mummies of Peru dating back 2400 years ago. The skin demonstrated round melanotic masses and disseminated bone metastases to the extremities and skull. This fascination with melanoma continued, with various further studies through time. John Hunter, a famous surgeon working at St George’s hospital medical school, was the first person acknowledged to have surgically removed melanoma. He excised a melanoma unbeknown to him from the jaw of a man in 1787. (Fig 3) This event was reported in Observations on Cancer in 1805 by Everard Home; the melanoma was described as “soft and black”. It was not until 1968 that the specimen was microscopically identified; the melanoma has been preserved at the Hunterian Museum, The Royal College of Surgeons.

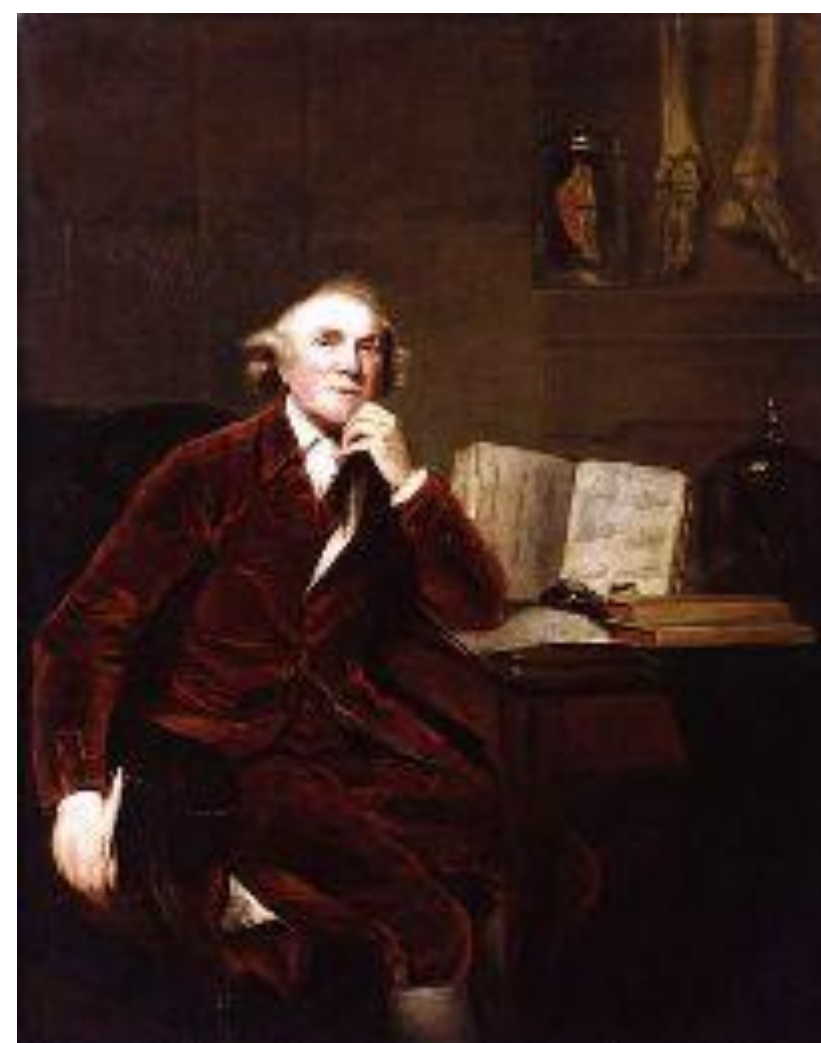


Figure 3: John Hunter, a surgeon at St George’s medical school, who removed the first melanoma from the jaw of a patient in 1787.



Figure 4: Set in the Necker Hospital in Paris, France, in 1816; René Laennec (1781-1826) listening to the patient’s chest with his new invention, the monaural stethoscope. As well as inventing the stethoscope, he was the first person to describe melanoma as a separate disease entity. (Wellcome Library, London)

It was French physician Rene Laennec (famed for the invention of the stethoscope) who first described melanoma as a separate disease entity in 1804 and later formulated the term *melanose* to define these tumours. (fig 4) He recognised that there was a difference between melanoma and black carbon accumulations, which were characteristically found in the lungs of patients undergoing autopsy. Once a recognised disease, further observations were made by English general practitioner William Norris in 1820 who suggested a hereditary cause of melanoma and he later recognised risk factors such as pale skin and light hair. As treatment, he suggested, in 1857, a wide local excision of the tumour and surrounding skin to reduce the risk of recurrence.

A CASE OF MELANOSIS, &c.

THE disease, which is designated by the term Melanosis, has but recently attracted the notice of the medical world; and though some equivocal traces of it are to be found in the celebrated works of Morgagni, Bonetus, and Haller, it was left to the pathologists of our time to describe and treat of it as a distinct and peculiar disorganization; and for the knowledge we now possess, limited as it is, we are indebted chiefly to the labours of our continental brethren. In the beginning of the present century, M. M. Bayle and Laennec, published the result of their investigations upon this intricate subject, and thus first drew the attention of the profession to it. But it would appear from a controversy

Figure 5: Thomas Fawcington published an interesting case on ocular melanoma which was managed with palliation in “A Case of Melanosis with General Observations on the Pathology of the Interesting Disease” in 1826. (Image from the Open Library, Internet Archive)

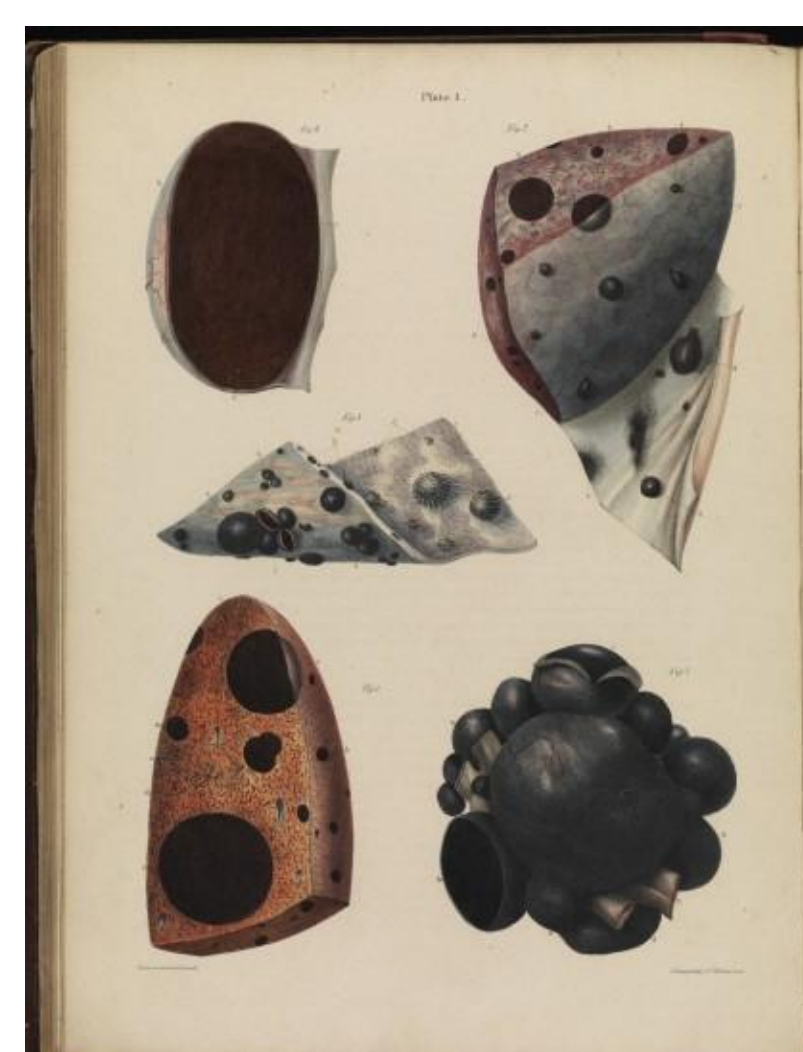


Figure 6: Melanoma deposits illustrated in the liver, lung and skin as drawn by Sir Robert Carswell in his works “Illustrations of the Elementary Forms of Disease”, 1838 (Wellcome Library, London)

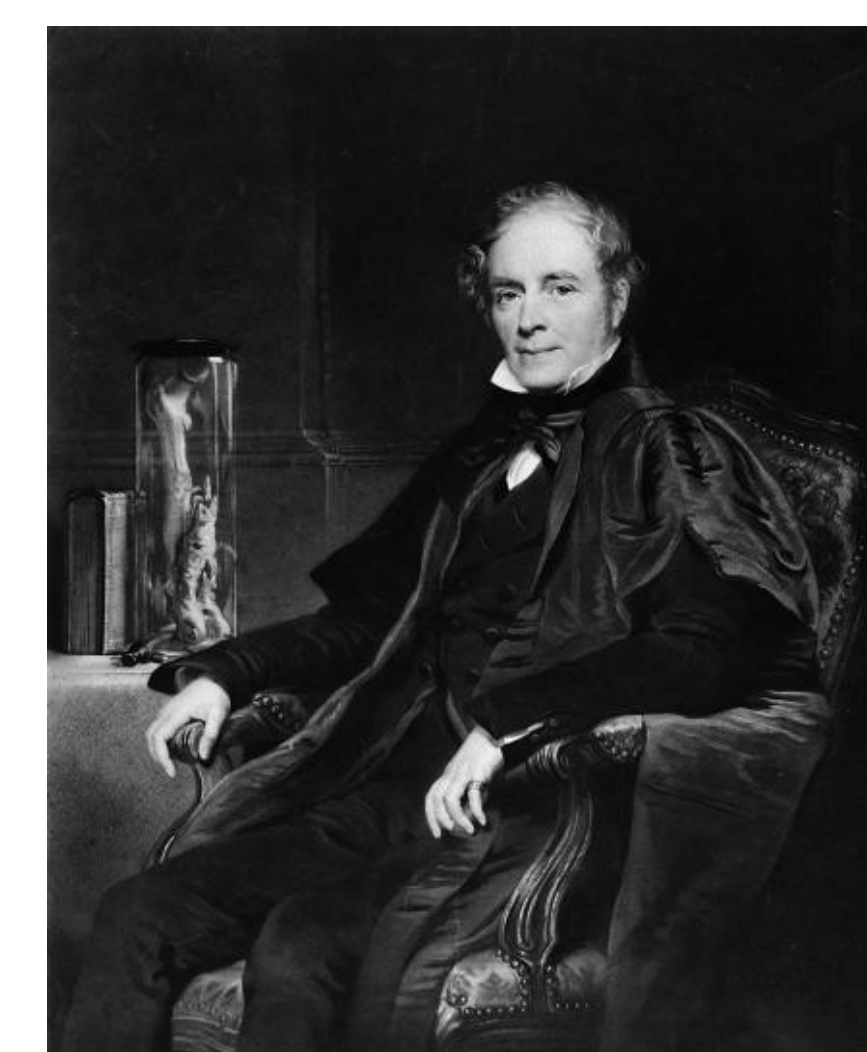


Figure 7: Samuel Cooper, a British surgeon, suggested that surgical excision of melanoma was the best form of treatment. (Wellcome Library, London)

Thomas Fawcington, a surgeon and lecturer, wrote in 1826 “A Case of Melanosis with General Observations on the Pathology of the Interesting Disease” where he described a patient with ocular melanoma and stated that palliation was the treatment option. (fig 5) In 1837, the first North American case of melanoma was described by Issac Parish, a surgeon in Philadelphia: a middle-aged female was admitted to Wills Hospital with a fungus tumour on her toe. She was managed with a mixture of leeches to her groin, ground elm and purgatives which was unsuccessful and she soon died.

Sir Robert Carswell, a pathology practitioner, drew detailed illustrations of melanoma metastases in his works “Illustrations of the Elementary Forms of Disease”, 1838. (fig 6) His drawings were based on an elderly patient who was brought to him partially paralysed to the Hotel Dieu in Paris; the patient soon became completely paralysed and died. Large black or brown tumours were found in several organs; “the brain contained two in each hemisphere, as large as hen’s eggs”.

In 1840, Samuel Cooper, a British surgeon, acknowledged that the best form of treatment is to remove the tumour and that advanced stages of the disease were untreatable. (fig 7) This remains somewhat true to this day.

This was followed up in 1892 when Herbert Snow, a surgeon, promoted surgical excision of melanoma and prophylactic lymph node dissection. In 1858 Oliver Pemberton published his works “Observations on the History, Pathology, and Treatment of Cancerous Diseases” where he detailed features of melanoma and sites of spread. Pemberton was the first person to describe melanoma in an individual with black skin from Madagascar. (Fig 8 & 9)



Figure 8: Oliver Pemberton published his works in 1858 “Observations on the History, Pathology, and Treatment of Cancerous Diseases” where he detailed features of melanoma and sites of spread. (Wellcome Library)

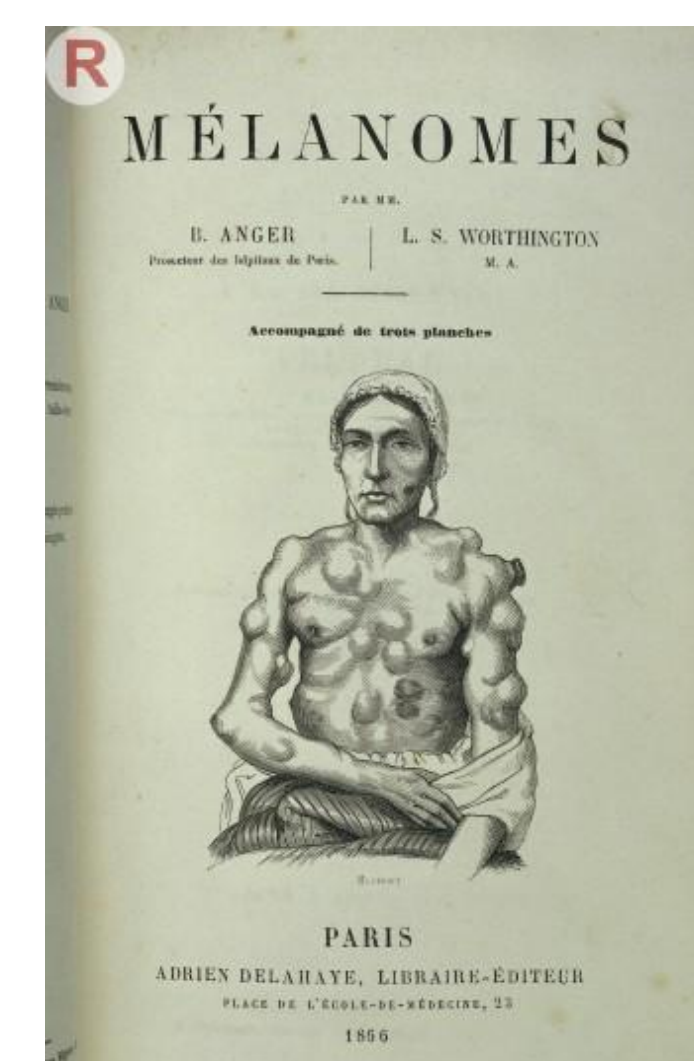


Figure 9: female patient with melanomas 1866. (Wellcome Library, London)

Since then further enhancements to treatment have been developed, for example Wallace Clark created the Clark’s scale in 1966 that referred to the depth of the skin invaded by the tumour. In 1970 Alexander Breslow acknowledged the importance of tumour thickness for prognosis, referred to as Breslow thickness. Both Clark and Breslow’s work have contributed to the current AJCC Melanoma Staging System.

The further recent focus on understanding cancer development and gene mutations has opened the door to identifying new weapons for man’s battle against melanoma.

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