

## HISTORY OF ONCOLOGY

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# The distinguished surgeon Bertrand Bécane (1728-1802?) and the syphilitic theory of cancer

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### Summary

Bertrand Bécane, Professor of surgery in Toulouse Medical School, is considered an eminent precursor of oncology, influencing the 18th century medicine with his syphilitic theory of cancer.

**Key words:** Bécane, cancer, history of oncology, syphilitic theory, viral theory

### Introduction

The first medical observations on cancer contagiousness are dating back to the 17th century. The Portuguese astronomer, mathematician and physician Abraham Zacutus Lusitanicus (1575-1642) mentioned the case of three young sisters with breast cancer. According to Lusitanicus, the disease has passed to them because they used to sleep in the bed of their mother suffering of breast cancer [1].

Nicolas Tulp (1593-1674), Professor of Anatomy in Amsterdam, universally recognized thanks to Rembrandt's painting *The anatomical lesson of doctor Nicolas Tulp*, confirmed the Lucitanicus' case stating that a man who sucked the cancerous breast of his wife, with the intention to relieving her, died shortly afterwards of a jaw cancer [2].

In 18th century, Dr. Smith, surgeon in Saint Thomas' hospital of London, proceeded in a breast cancer ablation and due to his scientific curiosity, tasted the liquid from the cancerous mass. He died, after some weeks, in the midst of uncontrollable vomiting and without being able to get rid of the bitter taste that invaded his mouth [3].

The same misadventure happened to a maid that used to change the bandages of an old lady

with breast cancer. After a certain period, she discovered a hard mass in her breast. Despite treatment, the tumor mass increased, the axillary lymph nodes got swollen and she died in terrible pains [3].

It was believed at that time that just the smell of an ulcerated carcinoma could be harmful. It was proved fatal for Dr. Bellenger as the putrid smell of his wife's breast cancer provoked him a nasal carcinoma [3].

### Bertrand Bécane and the syphilitic origin of cancer

Born in Savignac, Gers, France in 1728, Bertrand Bécane held the position of Professor of "bone diseases" at the Royal School of Surgery, in Toulouse from 1761 to 1793 [4].

Questioning the pathological fragility of bones, he made the mistake to attribute cancer as the main cause of all spontaneous fractures. Although these fractures may appear in osteosarcoma and metastatic carcinoma, bone syphilis was at that period a more common cause than it was cancer [5]. At this point, Bécane (Photo 1) made the confusion associating syphilis with cancer.

In a chapter of his book "Observations sur les

effets du virus cancreux divisées en cinq questions” entitled “*The virus of cancer corrupts the blood and the humours*”, Bécane mentioned: “It exists a cancer virus as it exists a venereal one. It is a common belief that the cancer virus is heterogeneous and differs from the venereal virus....What is called soft tissue carcinoma or bone fragility, is the result of a general virus, as the chancre is the result of venereal virus. It is the cancer virus that infects the lymphatic system of certain organs that present fluid stagnation as the mammary glands that contain a large amount of lymph and milk and the vagina that serves as an aqueduct for the menses. The lips, tongue and nose are parts where the blood flows slowly and contains the same amount of lymph as the bones. After infecting the fluids, the cancer virus causes tumors just like the venereal virus causes chancre and buboes” [6] (Photo 2).

Therapeutically, Bécane opposed to the operation. After him, cancer was a local disease. Caustics are useless and the excision inadequate. The operation of the breast it is not only barbarous and uncertain but also useless as the tumor is the result of a disseminated infection [6].

On the contrary, he was supporter of mercuriotherapy, a popular syphilis treatment. “Mercury alone can be of some help to cancer patients, but associated with camphor and antimony can dissolve and decongest the lymph nodes”. Believing that cancer patients had syphilis and *vice versa*, he used to administer mercury and the appearance of the least improvement confirmed his theory [6].

Moreover, in 1803, Dr. Aublanc made the echo of a widespread feeling stating that the testicular congestion is due to the syphilitic virus, able to degenerate into cancer [7].

But it was not until the late 19th century that becomes popular the belief that syphilis was the cradle of cancer.

### Bécane condemns charlatans and healers

When the cancer patient realizes that medicine can not do anything for him, he asks help to charlatans and healers.

At the end of the 18th century Bécane observes that Toulouse became “the warehouse of these people” that could persuade even the most educated persons. They all say that are holders of a radical cure. It was a priest that administered “a secret familial remedy” in a woman suffering from a facial tumor, a blacksmith that provoked fatal hemorrhage, manipulating a breast cancer and a gardener that possessed the “secret of the



Photo 1. Professor Bertrand Bécane.

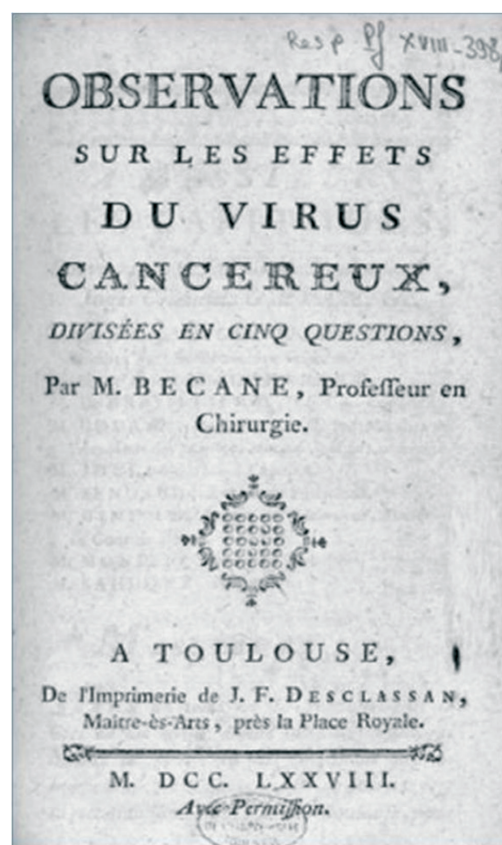


Photo 2. Frontispiece of Bécane's book on cancer.

providence" able to cure the cancerous ulcers. Bécane refers also to a healer that was proclaiming the infallibility of his anticancerous unguent and when he himself got cancer his treatment was proved useless as he died [7].

## Discussion

Along with the first theories of cancer transmission it is also posed the issue of cancer heredity. The phenomenon of entire families being affected by cancer stuck the physicians of 18th century.

Some of them, like Bécane, believed that cancer was the result of a venereal, syphilitic virus that could be hereditary or acquired, while for some others as Bernard Peyrilhe (1737-1804), cancer was not a hereditary disease but the result of certain organs' predisposition [8].

In the following centuries, the bacterial, coccidian and parasitic theory of cancer dominated medical thought with prominent example the Danish Professor of Pathological Anatomy Johannes Fibiger (1867-1928) who won the 1926 Nobel Prize in Physiology or Medicine claiming that the parasite *Spiroptera* could be at the origin of cancer [9].

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