**TOWARD A USELESSNESS OF CLINIC? THE EXAMPLE OF PROSTATE CANCER**

Thibaud Haaser, MD, PhD 1,2

1. University Hospital of Bordeaux, France
2. EA 4574 "Sciences, Philosophie, Humanités", Université de Bordeaux, France

Mailing adresse : Service de Radiothérapie – Hopital du Haut Lévêque Avenue Magellan 33600 Pessac

Mailid : thibaud.haaser@chu-bordeaux.fr

Phone : +33 557623300

Conflicts of interest : None

No funding to declare for this work.

This article was first submitted to Medicine, Health Care and Philosophy.

**ABSTRACT**

This article aims to describe the implications of the growing place of biological procedures in cancer diagnosis and medical cares on the clinic activity of physician. Prostate cancer appears as a pertinent example for such a reflection. The reliability of prostate specific antigen blood test (for diagnosis and follow up of prostate cancer) could spare patients from clinical examination consisting in digital rectal examination. Within a debate leading to an even smaller place of clinic in prostate cancer cares, the question of the useful of clinic raises. Could we consider ethical to perform digital rectal examination or other clinical procedures if no direct contributions to concrete cares is expected. We describe how clinic without strictly medical impact can still have relevance for non-clinical purposes. Based on the representations of both patients and physicians on clinic, these uses of clinic still constitute a very useful tool for building care relationship.

**INTRODUCTION**

Cancer prostate appears as a paradigmatic situation for a reflection on current changes in the oncology practice and more concretely on the impact of care evolutions on clinic due to the even greater impact of Prostate Specific Antigen (PSA) blood analysis in the management of cancer diagnosis or therapeutic evaluations. Moreover clinical examination for prostate cancer consists in digital rectal examination (DRE), an unpleasant and invasive clinical act. This opposition between a quantitative and measurable blood test and a subjective invasive (and for some patients quite humiliating) clinical procedure raises the possibility of thinking the growing place of biomedical or radiological procedures in medical practice and questioning the place of clinic in the current medical practice. As radiation oncologist, we propose an ethical analysis of this situation and our reflections about clinic with a basis on our daily oncological activity.

**CLINICAL CONTEXT**

Prostate cancer is the most frequent male cancer (1). A large majority of our patients are asymptomatic at the time of treatment because their cancer has been detected: prostate cancer is in most cases a silent disease (presence of symptoms often means a more locally evolved disease). There is no consensus about systematic prostate cancer screening but an early detection can be proposed to 50 to 75 years-old men in a shared-decision making (2). This early detection procedure is based on two combined practices: the DRE (looking for an induration, a nodule, an asymmetry in the prostate) and a blood test of PSA whose elevation, without being specifically related to cancer, is a tumor marker. Thus in the context of an early detection procedure, an abnormal DRE, or an elevation of PSA above 4 ng/mL are considered as sufficient arguments to propose prostate biopsies (3). DRE and PSA are both necessary because some undifferentiated prostate cancers can occur without PSA increase with a real value for DRE (4). On the other hand, urology studies demonstrate the lack of sensitivity of DRE for prostate cancer detection (5). Even though DRE remains essential, its efficiency is clearly lower than PSA blood test (6, 7).

Biopsies are realized with an echographic guidance, using a transrectal approach (i.e. using natural way). In case of cancer diagnosis and according to the risk level of the cancer, patients will have radiological exams (magnetic resonance imaging, cone tomography, bone scan) in order to assess the local or metastatic extension of the disease. New imaging modalities as PET scanner (using PSMA or Choline with radioactive markers for example) are now available for an even more reliable cartography of cancer. After the assessment of cancer extension, therapeutic propositions will be formulated by an uro-oncology multidisciplinary committee depending. In cases of non-metastatic prostate cancer, many treatments can be proposed according to each patient’s situation. It can consist in a radical surgery, an external beam radiation therapy (with or without hormone therapy), high intensity focused ultrasounds, interstitial brachytherapy, or a watchful waiting in cases of indolent prostate cancers (8).

After oncological treatment, no matter which it was, the follow-up takes two aspects into account. First urinary and sexual tolerances will be followed with particular attention because of possible side effects after all these therapeutic strategies. Efficacy of treatment will be evaluated with PSA only, because its variations are strong and reliable markers of cancer remission or recurrence. After surgery, PSA must be undetectable; after radiotherapy, PSA decreases until the lowest level (nadir) and must not increase 2 points higher than this level. There is no place for systematic imaging exams before PSA thresholds are raised, and in many cases, the lone PSA variations lead to second treatments. This is the reason why the concept of biochemical relapse raised: a PSA over 0.2 ng/mL after surgery, or 2 points over PSA nadir after radiation therapy is the sign of biochemical recurrence (9).

Place of clinic is very limited. DRE is not a highly reliable modality of post therapy follow up (10, 11, 12). For example, it has been scientifically shown that modifications of DRE after radiotherapy occur only in cases of very high PSA levels (with a mean of 8 ng/mL while biochemical recurrence is diagnosed for much lower levels) (13). However annual DRE is still recommended after prostate cancer treatment (14). By the same, the rest of clinical examination (like bone palpation looking for bone metastasis for example) has no major impact on cares, since a close monitoring of PSA allows therapeutic propositions before cancer becomes symptomatic.

**USELESSNESS OF CLINIC**

For each step of cares, clinic loses its interest and one could conclude to a uselessness of clinic for patients treated for prostate cancer. Since PSA is the key marker of remission or recurrence, and as this disease remains asymptomatic in most cases, medical practice can be performed without any clinical examination: PSA blood test and careful questioning are sufficient. PSA is often the only clue of cancer progression. PSA level is at the center of both people’s attention, and is an easy way for patients and physicians to follow disease course: nothing is easier to understand than a number with determined thresholds. A patient with a PSA increase knows what that can mean. Only the side effects of oncological treatments are possible clinical expressions of cancer reality and their evaluation is based on several urinary or sexual scores (IPSS, IEF5 for example) and clinic is rarely required. Once again, we insist on this type of cancer which remains asymptomatic even in case of recurrence: PSA is the only access to cancer reality for patients and care professionals. With a pragmatic vision, this unnecessity of clinic makes patients’ follow up particularly easy and fast to perform. Since questioning and PSA blood test guide practitioners’ assessments, medical consultations can be limited to 10 or 15 minutes and some even propose to reduce follow-up to a simple phone call (15) .

Thus prostate cancer is a paradigmatic example of the evolution of medical practices with biomedical procedures that can literally replace clinic. Even if it could be interpreted as a kind of loss of medical ideal close to patient’s body, these procedures are true evolutions. PSA is the primary reference for assessments and adaptations of care, so that a systematic clinical examination could be considered as unethical when the balance between utility and futility leans clearly on the side of uselessness. Is it reasonable to ask a patient to undress, to lie on the examination table, to expose his body and intimacy, if the physician will not obtain any significant contribution from clinic for patient’s care?

Symbolically, it is essential to keep in mind the representations about prostate cancer and performing DRE. Current works focus on these topics of psychological distress and hard representations about prostate cancer diagnosis, treatments and sequelae. Although this small organ is not indispensable to life, it represents virility, power and reproductive capacity for men. These representations are strengthened by the side effects of oncological treatments, such surgery or radiotherapy. Erectile dysfunction can occur and, absence or serious troubles of ejaculation are almost systematic. The consequences on patient’s own perceptions of his body and sexuality are considerable. One of the many recent examples of this disarray after cancer is Tahar Ben Jelloun’s book “Ablation”, inside which raises the question of a new type of life without sexuality (16). Urinary side effects, especially urinary incontinence (mostly after surgery) can lead to a genuine feeling of shame. There a whole psychological and representational context in uro-oncology.

In daily medical practice, performing DRE reinforces this possibility of shame. DRE is an evident marker of the asymmetry between patients and physicians. Within this male elder population between 70 or 75 years, DRE can lead to feelings of domination, and sometimes humiliation. This practice that medical purpose allows to do is otherwise considered as an authentic sexual aggression. Consenting to a DRE is submitting to the authority of a physician who can do what other people could be condemned for. As a consequence, it seems clear that DRE (and by extension all clinical activity) is not imperative in prostate cancer because of its therapeutic uselessness, its lack of impact on cares and the bad representations of this procedure. So that, medical practice at time of diagnosis but mostly after treatment for prostate cancer is in most cases a non-clinical procedure.

**NOVEL PLACES FOR CLINIC**

Despite these previous considerations, daily medical practice tends to demonstrate a persistent place for clinic. As constraining as it may be, clinic has secondary effects which could justify it by itself. Clinic would not be considered as a diagnostic or prognostic procedure: it would be understood as an essential condition for the constitution of a relationship between a patient and his physician: a different place for a different purpose, not as a medical element but as a relational factor. Performing clinic is like sending a message to the patient, and sometimes to relatives. During our own medical practice, we found roles for clinic: although it is not essential for care, clinical examination can participate in the creation of the conditions and relationships of care.

The objective is not to perform clinic in the sole purpose of still being a doctor who touches patients’ body (like a medical claim in such a technical context of radiation oncology). In this case, clinic would be performed in order to prove ourselves that we are still physicians. In fact, it is question of identifying innovative utilities, a different finality for the clinical act. Admittedly, clinic would lose its nobility, and would not be justified as an end, essentially because it does not constitute the cornerstone of our medical practice. But despite these losses (of grandeur and of place in medical decisions), clinical act remains relevant. Considerations on clinic are not exclusively pejorative (even concerning DRE), and clinic is also the fundamental representation of physician. Despite a lack of pertinence, or more precisely, a lack of technical pertinence, clinic still has a place, and can represent a real opportunity in case of difficulties.

**Clinic for information transmission**

First, clinic can have a real impact as a factor of mediation of information. Follow-up consists in a PSA evaluation every 6 months. Due to this frequency of PSA measures, recurrence can be detected very early and patients are preserved from symptoms due to cancer. Thus, cancer recurrence has no sensible consequences for patient in most cases. The psychological integration of recurrence’s reality is frequently hard because of this absence of clinical impact. How could it be possible to realize this fact of recurrence when there is no manifestation of the disease in my body?

For example, we recently met a patient who had a radical prostatectomy for a low-risk prostate cancer because his PSA was once again detected, 3 years after initial surgery. At first consultation, he had no symptoms and PSA was 0.12 ng/mL. Routine DRE was done few weeks ago, so it was not necessary. At that time, because of the detection of PSA, the patient was informed of the necessity to survey his situation with a blood analysis every 3 months. He was said that a PSA over the threshold of 0.2ng/mL would lead to a radiation therapy for cancer biochemical relapse. On a medical sight, this kind of situation has no clear epistemological status: the reappearance of PSA signs the presence of cancer, but as salvage radiation therapy is proposed for PSA level over 2ng/mL, cancer biochemical recurrence is pronounced and treated only over this threshold. Treating patients with this low PSA level is based on the fact that over 0.2ng/mL after surgery, PSA will increase exponentially with a pejorative prognostic value of PSA increase. 4 months later, PSA was 0.22 ng/mL. This patient reported, as many others the difficulty to “believe in this biological reality” or “to feel as a patient with a severe disease” with this lone PSA increase. “There are no changes and now I have no choice but receiving radiations and being harmed”.

The main problem is that therapeutic indication for radiations (and so all the possible clinical consequences) is based on biological findings. Is it only possible to integrate information and to invest medical treatments and recommendations when people have no sensible, incarnated signs of disease in their own body? This feeling of strangeness is very frequently reported in these situations. Patients see their medical situation and their quality of daily life challenged without any objective and physical perception. These words are very close to Georges Canguilhem’s thoughts about people’s own normativity. According to him, illness (as healing) has medical definitions that patients do not strictly apply to themselves and he insists on everyone’s own definition of normal or pathological status. “Ill” and “healed” categories have a multitude of singular definitions, according to everyone’s own normativity (17).

As care professionals, our duty is to accompany patients through their medical course but also in their representations, interpretations and daily living with cancer. Information is the key point of the acceptability of disease’s reality and of congruence to medical propositions. Information is the first step for the integration of disease’s reality and the fundament for patient’s consent. In these cases, without being fundamental for medical cares or therapeutic decisions clinic can find a pertinent place: not as a determinant factor for medical care but as a symbolization of cancer evolution and therapeutic necessity. As clinic (and DRE in particular) is not performed at each consultation, its realization can signify that something’s changing on the medical course of patients. For our example, no great or significant information could emerge from clinic, but the simple fact of proceeding clinical examination is a signal of this changing. Clinic is an investigation for cancer symptoms or signs, and even though it is highly probable that nothing will be found, this change in physician’s procedure constitutes an evidence of reality. In these cases, clinic does no longer investigate the reality of cancer recurrence (because PSA level attests it) but it plays an important role for the transmission of the information, and is a real matter for patients to realize this hard reality.

**Clinic as an answer**

The non-symptomatic characteristic of most prostate cancers constitutes another difficulty for patients in the sense that they do not have any way to evaluate themselves the evolution of their disease. PSA is a strong and reliable marker of cancer evolution but it remains disembodied and some patients suffer from a lack of confidence in a sole biological evaluation. For other cancers, clinical evolution has concrete clinical and patients pay attention to these signs (for example patients with lymphoma can touch their lymph nodes or transit cutaneous metastases are daily carefully examined). This accessibility of cancer is an important fact for some patients, and sometimes, the deprivation of this direct access can generate difficulties. Thus, in our case, DRE is considered for these patients as a way for a concrete and direct evaluation of cancer. As unpleasant it can be, DRE is frequently asked by patients in routine follow-up consultations: having a DRE is a possibility for having physician’s singular evaluation of cancer. Evolution of cancer is assessed with a clinic, and by consequent human way, and not just with a biochemical analysis.

These demands might be strange for care professionals, but this demand of clinical relation between patients and physicians is a reality. With clinical examination, there is a time and an attention to patients, to their bodies. It is an evidence for legitimating patients’ plaints or worries. All these facts make clinic a cornerstone of medical competence and a fundament of cares ‘humanity.

Some patients, without a word and without having been invited to, go by themselves to the examination room and get undressed. First of all, in this population of elderly male patients, physician is the one who touches the body, who has no fear to do it. As one of our patients said: “a good doctor is not afraid to get his hands dirty, otherwise he is not a doctor” (these words were addressed to a young medical student). Here, clinic is performed as an answer to a call for attention. It doesn’t have to be considered as a right that people could absolutely demand. We can argue that this is also the recognition that for some patients, confidence in their physician and his/her techniques is more important than a quantified evaluation of cancer. The doctor is especially the one whom I authorize to touch my body and to be the exegete of it.

**Clinic as a way to approach intimacy**

The clinical examination is also the opportunity for singular exchanges between patient and physician. The request for clinical examination can sometimes be in reality, a request for a dual relation. Indeed, in cancer practice, the presence of relatives is often very marked and there are very few patients coming alone at consultations. Medical practice in urological oncology leads to very intimate themes such as urinary continence or erectile dysfunction. In front of their wife or family member, patients have a totally different discourse from theirs with physician alone. There is a clear discordance between what is said in front of the companion or other relative and what is said in the context of a dual relation.

A practical solution could be to not welcome relatives or to bring them out. Bringing the patients' companions out of the consultations could be interpreted symbolically by relatives as a kind of exclusion that could harm the relationship of confidence, or as a sign that something serious has to be to communicated to the patient. The idea of a secret that can never be shared could rise. In addition, it is probably better if the information provided during these semi-annual or annual consultations are heard by several persons: they are better understood, integrated and remembered.

Clinical practice in a different room, with a closed door, in a well-established relationship, creates the conditions of intimacy. The absence of third parties makes it much easier to aboard delicate subjects. For example, care request against erectile dysfunction, anxiety symptoms are often formulated during this clinical examination. On a medical sight, this possibility of a dual relationship is an opportunity to better understand what is specifically at stake for patients. It is a clear way to focus cares on them, and patients are often invited to come to the examination room, meaning the accompanying person and the medical students to stay in the office. Once again, clinical elements are not really important, but the role of clinic here is to create favorable conditions for an exchange as authentic as possible in order to approach intimacy of the person, with an attention to his singularity. It is a manner for physician to offer patients another dimension for speech.   
**Clinic as a pause**

Clinical examination is also an opportunity to establish a particular temporality, or even a certain sort of pause within the consultation. Time of clinic allows to make tension decrease when the consultation is difficult or is about to be. Oncological consultations are frequently the place for bad news or hard discussions about therapeutic propositions (including abstention and propositions of support cares only).

During our oncological practice, a 60-year old man with a prostate cancer, were followed after a long history. After an initial surgery, and a period of interruption of cares, he presented massive lymph nodes recurrence with an imperative of a combination of chemotherapy and hormonal therapy. Due to a good clinical and radiological response of the disease, radiotherapy was proposed and we met the patient. He reported massive side effects of treatment, not due to chemotherapy but to hormonal therapy (note de bas de page)

Because of the general and principally sexual side effects of hormonal therapy, we discussed about the theoretical duration of hormonal therapy. And after a long negotiation with all information about the positive impact of a prolonged hormonal therapy after radiation therapy, we found the consensus of 6 months during and after radiation. The patient was clearly informed that the principle aim of this radiation therapy was to propose him a possible therapeutic pause but the probability of total disease control was nearly nul: cancer recurrence would be an unavoidable event in his medical history but with radiations; we had a chance to put away this event. And the problem consisted in the nature of the treatment for cancer recurrence because in this case, a hormonal therapy would be prescribed and all the side effects would occur again(see end note 1). Then 18 months later, inevitable happened: PSA level increased over the admitted thresholds and biological recurrence for this metastatic disease was reached. A renewal of hormonal therapy appeared imperative.

Of course, this patient who was supported for several years for this disease knew what this increase meant. He arrived at the consultation, disappointed, obviously sad, and very reticent to be imposed a new chemical castration by a young physician. The consultation began and almost immediately, the discussion centered on the PSA level and the need for hormonal therapy. The patient said he preferred to die if he was "no longer able to have erections" (textually) and stops the dialogue. Her companion showed anger and sadness, saying that she did not care about sexuality, especially for what we were "doing right now." Situation was very conflictual: conflict between the patient and his wife, potential conflict between the patient and the physician. Situation was also violent for the patient, his companion and for the physician too because it is not easy to welcome with calm such extreme reactions and also this treatment refusal.

In these dead lock conditions, the patient was invited to go to the next room for a clinical examination (with no DRE of course because without interest in this context). We proceed to a lymph node palpation, an abdominal palpation, a thoracic auscultation, and a careful bone percussion. If the PSA increase justified a hormone therapy, it was clear that no major information would emerge from clinic for this closely followed and asymptomatic patient. Paradoxically, conflict between the theoretical and imperative indication of treatment based on scientifically legitimacy on the one hand, and the autonomy, or rather the aspiration for self-determination of patient on the other hand found appeasement because of clinic.

In such cases, clinic will not bring much in itself. But it will help to the physician to get back to a position of caregiver and no longer as a person who knows for the patient what must be done and imposes the therapeutic decisions. This repositioning as caregivers is essential for the patient but also for care professionals and relatives. If the clinic represents one of the aspects of the medical omnipotence (by the license to see, to touch the naked body or even to penetrate it via the pelvic examinations in particular), the conflict between a presupposed medical authority and patient’s autonomy gets appeased through a process of putting issues back to their proper place. Clinic is not used in order to strengthen medical power, but with the aim of putting the medical discourse in a care approach, with specific attention to the patients (his reality, his singularity and representations) and a spirit of benevolence.

One could legitimately ask the question of the ethical or unethical use of clinic in such situations. Clinic is instrumentalized because it is performed without own medical purpose. We think that a pragmatic approach is necessary in these cases and clinical examination is effectively used as a tool for calming rising passions. Evidently accent is put on positive representations of clinical practice, and some might think it simply consists in a manipulation of the person in order to avoid a difficult discussion. This clinic is useless as such but it offers a temporality. This particular temporality, this time out of time, like a little suspended, helps patients and physicians. Words can be exchanged, or not. If the patient wants to talk to the physician alone, he gets an occasion. And inversely, as we already said, if the physician considers that some points have to be addressed face to face, he gets his occasion.

Everyone calms down, thinks about what was said and what is about to be said. It's a real breathing for everyone. The idea of latent conflict steps back. It does not fade away, far from it, but everyone knows the position of others. We simply avoid the rise of words, passionate reactions and decisions made under the influence of immediate feelings and not on the basis of convictions, clear and rational ideas of both patient and physician. After that, discussions are not easier, they are always difficult and raw because of the discussed subjects: sickness, disappointment, imminent death or the choice of the conditions of the end of life. But while remaining close to the concrete life of patients and their moral, ethical and psychological issues, the exchanges can be frank and calm.

**CONCLUSION**

Thus, in the situation of patients with prostate cancer, the clinic could no longer be justified by itself. It loses its diagnostic or therapeutic evidence, and is supplanted by the use of a blood biomarker. Everyone (patients and care professionals) has integrated this information and this is the reason for the close attention to PSA level. Without being totally specific of prostate cancer cases, these considerations about clinic have an echo for a larger range of medical cares. Technical advances in imaging and biology raise the question of the need for a clinical examination whose constraints (nudity, exposure to other’s look, or feeling of vulnerability) could be avoided.

However, medical practice tends to prove that clinic still is an essential element for physician: no longer as a way to investigate or a central element in medical decision, but as a way to allow new spaces during consultations for better understanding and attention to patients. Space for answering an intimate and legitimate expectation, (waiting for attention from a person with a serious but silent illness); space of communication with a symbolization of difficult information (often hard to hear and to integrate); space of confidentiality to approach intimacy (including sexuality); space of time finally, allowing patients and care professionals to resituate each other in a care relationship (which is a real opportunity for rethinking at each consultation the therapeutic link throughout this long, and sometimes complex accompaniment). Obviously, these uses of the clinic should not be systematic and the need for DRE should be established first on the expected contributions in terms of care but we support the idea that the non-biomedical contributions of clinic can justify its realization on certain occasions.

End note 1: Hormone therapy is major treatment of prostate cancer. It consists in the interruption of testosterone secretion because of hormonal dependence of prostate cancer cells. This chemical induced castration induces disease control. Side effects of hormone therapy are less important than chemotherapy’s ones but impact on daily life keeps major, especially concerning sexuality (with major dysfunction for erection and trouble in sexual desire).

**REFERENCES**

1. Institut National du Cancer, « Les cancers en France, édition 2016 ». 23 January 2019, -[*https://www.e-cancer.fr/ressources/cancers\_en\_france/#page=59.T*](https://www.e-cancer.fr/ressources/cancers_en_france/#page=59.T)*.*

2- F. Rozet al., “French CCAFU guidelines — Update 2018—2020: Prostate cancer”. *Progrès en Urologie* 28 (2018):S79-S130.

3- Ibid.

4- A. L. Walsh et al. 2014., “Digital rectal examination in primary care is important for early detection of prostate cancer: a retrospective cohort analysis study”. *British Journal of General Practice* 64 (2014): e783-e787.

5- L. Naji et al., “Digital Rectal Examination for Prostate Cancer Screening in Primary Care: A Systematic Review and Meta-Analysis”. *Annals of Familial Medicine* 16(2018):149-54.

6- W. J. Catalona, et al., « Comparison of digital rectal examination and serum prostate specific antigen in the early detection of prostate cancer : results of a multicenter clinical trial of 6630 men”. *Journal of Urology* 151 (1994):1283-90.

7- J. A. Halpern et al., “Use of digital rectal examination as an adjunct to prostate specific antigen in the detection of clinically significant prostate cancer”. *Journal of Urology* 199 (2018): 947-53.

8- F. Rozet al., “French CCAFU guidelines — Update 2018—2020: Prostate cancer”. *Progrès en Urologie* 28 (2018):S79-S130.

9- Ibid.

10- P. A Johnstone, J. T. McFarland, R. H. Riffenburgh and C. L. Amling, “Efficacy of digital rectal examination after radiotherapy for prostate cancer”. *Journal of Urology* 166 (2001):1684-7.

11- B. J. Chaplin et al., « Digital rectal examination is no longer necessary in the routine follow-up of men with undetectable prostate specific antigen after radical prostatectomy: the implications for follow up”. *European Urology* 48 (2005):906–10.

12- K. S. Warren and J. P. McFarlane, “Is Routine Digital Rectal Examination Required for the Followup of Prostate Cancer?” *Journal of Urology* 178(2007):115-9.

13- A. Doneux et al., “The utility of digital rectal examination after radical radiotherapy for prostate cancer”. *Clinical Oncology* 17 (2005):172-3.

14- F. Rozet al., “French CCAFU guidelines — Update 2018—2020: Prostate cancer”. *Progrès en Urologie* 28 (2018):S79-S130.

15- A. Doneux et al., “The utility of digital rectal examination after radical radiotherapy for prostate cancer”. *Clinical Oncology* 17 (2005):172-3.

16- Ben Jelloun, “Ablation”. Ed Folio (2015).

17- G. Canguilhem, “Le normal et la pathologique“. Ed : Presses universitaires de France (1943).