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## **Chronicity and the patient's decision-making work. The case of an advanced cancer patient**

### **Abstract**

This paper focuses on the particular situation of an advanced cancer patient whose condition has taken a chronic turn. We argue that this chronicity falls at the frontier of Evidence Based Medicine because the uncertainty about the patient's condition sometimes leads physicians to resort to clinical trials or non-licensed drugs to prevent the disease from progressing. The situation leaves plenty of scope for individual adjustments between patients and their doctors. Advanced cancer is regarded here not just as a biological event but as a chronic illness and a "negotiated reality". We argue that the chronicity of advanced cancer patients' situation broadens the patients' scope for "work", and we have called this specific type of patient's work "decision-making work".

This paper is based on a case study focusing on Patrick, a middle-aged Frenchman with metastatic lung cancer who underwent oncological treatment for seven years and was strongly determined to find new therapeutic options even if this meant having to go abroad. He actively orchestrated his therapeutic itinerary by reorganising his relationships with the medical world and coordinating the physicians' work. His particular social position enabled Patrick to bypass some of the current medical rules and to disturb the usual division of medical responsibilities. The chronicity of his condition placed him at the frontier of the health care system.

**Key words:** chronicity; advanced cancer; therapeutic itinerary; therapeutic decision-making; France.

## Introduction

Specialists in the field of biomedicine have come to redefine cancer as a chronic disease rather than being a rapidly fatal disease. The term "transition to chronicity" has been used (Lage and Crombet 2011) to describe the case of patients with advanced cancer who have benefited from the latest therapeutic innovations, especially precision medicine (immunotherapy and molecularly targeted therapies) which became a much more routine part of the cancer experience during the last two decades by means of clinical trials (Keating and Cambrosio, 2012). However, defining cancer as a chronic disease has been quite a challenge in the medical literature as Pizzoli et al. have pointed out (2019). The following definition which has eventually been proposed: "cancer as a chronic disease is something that can be controlled and managed for a certain time extent or that can present a recurrent form" stresses the fact that acute and chronic phases tend to alternate in advanced cancer patients' trajectory (Pizzoli et al 2019, 12). Although they may not be entirely cured, patients with advanced cancer sometimes continue to survive for several years thanks to the latest therapeutic advances. However, although the characteristics of advanced cancer chronicity are similar to those of other long-term diseases (in terms of the duration, uncertainty, daily illness management, and control as opposed to cure – Baszanger 1986), the outcomes and social consequences of living with advanced cancer differ from those associated with other chronic diseases such as diabetes because of the threat of a lethal outcome hanging over the patients' heads. This dramatic issue impacts the strategies adopted by patients for dealing with their chronic illness. Patients with advanced cancer have to cope with evolution of the disease, several periods of hospitalisation, the side effects of cancer treatment, pain, and emotional reactions. More than attempting to lead normal lives, they develop strategies for keeping hope and coping with uncertainty about the future (Brown, de Graaf and Hillen 2015).

This paper focuses on the particular situation of patients with advanced cancer whose disease has taken a chronic turn. We argue that chronic healthcare pathways of this kind are shaped by medical practices which lie at the frontier of evidence-based medical knowledge defined as the use of validated scientific data to support medical practices. These data are mainly produced by performing randomised clinical trials, which are held to be the highest level of medical evidence (Marks 1997).

Since the evolution of the disease is highly uncertain, the best treatment to use is not always consistent with standard practices. These situations sometimes lead physicians to resort to clinical trials or non-licensed drugs, which places their practices at the frontier between standard cancer care and research. Baszanger (2000, 2012) has described the medical strategies used at the boundaries between research and care as "the bricolage phase", when oncologists sometimes resort to therapeutic innovations such as including patients in phase 1 or phase 2 trials or turning to investigational therapy or off-label therapeutic products as an alternative to palliative care. This frontier can be regarded as a "zone" between curative and palliative treatment. In most cases, patients spend only a short time in this zone due to the progression of the disease. Some patients can either benefit directly from the latest therapeutic approaches such as personalized anti-cancer treatments, which raise "the promise of increased survival" (Arteaga Perez 2022, 2) and extend the temporality in this frontier zone. As shown by Arteaga Perez (2022), the access to these expensive innovative therapies depends on the available hospital infra structures, the ability of clinicians to deal with the availability of clinical trials, and sometimes the economic resources of patients. The present case study explores the patient's experience in this frontier zone, focusing in particular on the patient's work "when the personalisation happens from below" (Arteaga Perez 2022, 1).

Advanced cancer is presented here as a chronic illness which can be approached like "a negotiated reality" (Glaser and Strauss 1975) rather than being just a biological event defined by long-lasting, life-threatening treatment which is more likely to alleviate patients' symptoms than to cure them. It is assumed here, in line with previous authors taking an interactionist approach, that "chronic illness and its outcomes are shaped by the decisions, tactics and organisation of "work" carried out by patients and others, over the 'trajectory' of the illness" (Bury and Monaghan 2013, 73). We describe how the chronicity of advanced cancer broadens patients' scope for work (Kerr et al 2018) and requires a specific kind of patient's work, which we have called "decision-making work". We do not take this decision-making work to consist of a process of active *participation* by cancer patients in their medical decision-making by choosing between standard care and clinical trials which has been previously analysed in several studies (e.g. Sinding et al 2010; Jansen 2014; Gaston and Mitchell 2005), or patients' participation in clinical trials (Brives 2013; Kerr and Cunningham-Burley 2015). The patient's decision-making work consisted rather of finding new therapeutic options that had not been envisaged by their oncologists, and persuading the latter to administer these treatments and include the patient in clinical trials which are perceived by both physicians and patients as part of the "technological imperative" in medicine (Kaufman et al 2011; Arteaga Perez 2021). The patient's decision-making work is a social and cognitive work undertaken by patients to search new therapeutic opportunities. This

patient's therapeutic quest is in line with the "biomedical embrace" which "creates a popular culture enamored with the biology of hope, attracting venture capital that continues even in the face of contemporary constraints to generate new treatment modalities" (DeIVecchio Good 2001, 407). This work is therefore close to the involvement in the research process of people with HIV/AIDS, which was described back in the 90's (Epstein 1995). Without being exactly a form of "evidence-based activism" (Rabeharisoa, Moreira and Akrich, 2014), the patient's decision-work is a form of patient's engagement with medical knowledge production which can transform the patienthood.

This paper focuses on Patrick, a middle-aged Frenchman with metastatic lung cancer. During the last decade, thanks to the increase in the number of clinical trials performed, the medical promise of curing cancer and extending the survival of advanced cancer patients has improved, especially in the case of lung cancer (Timmermann 2014). However, the prognosis of this patient's particular form of cancer was very poor, and very few therapeutic options were available during Patrick's care pathway (2003-2010). Patrick had a singular, atypical healthcare path because he was treated for so long during the metastatic phase (for seven years), and he was so strongly determined to find new therapeutic options for prolonging his life. The cultural, economic and social resources he devoted to this quest give us indirect insights into the social inequalities involved in patients' access to therapeutic innovations.

We have presented Patrick's case elsewhere (Besle and Sarradon-Eck 2019), focusing on how "risky" experimental treatments can be regarded as a source of patients' autonomy. Here we focus on another important theme that was not addressed in the previous paper: the chronicity introduced by the use of innovative treatments.

The case under investigation here – that of Patrick's therapeutic itinerary<sup>i</sup> – is certainly not representative of most cancer patients' usual experience. We were interested in the singularity of Patrick's history because his therapeutic trajectory continuously stepped over the frontier between standard cancer care, palliative care and research, whereas most advanced cancer patients encounter this frontier for only a short time.

This case study is in line with Anita Hardon and Eileen Moyer (2014, 112), who proposed "to incorporate in our analytical frameworks the creative agency of the users of medical technologies, the particularities of local markets and care constellations, class hierarchies, social relations and family dynamics". Patrick's recourse to experimental drugs gave rise to several conflicts and negotiations with the medical stakeholders involved. His ability to orchestrate his therapeutic itinerary between medical routines and clinical trials led him to bypass the current medical norms. As well as the patients' treatment pathways analysed by Arteaga Perez (2022) in the UK context of cancer care, Patrick's singular therapeutic itinerary therefore sheds interesting light on the work carried out by some patients to access to life-prolonging drugs and, above all, to survive. His "survival work" (Stetz 1993) involved a great deal of decision-making, as well as questioning the limits of most developed countries healthcare systems by upholding individual choice as an ideal (Mol 2008).

After describing the method used in this study to document and analyse Patrick's survival work, it is proposed to present the main chronological events in his therapeutic itinerary before analysing the work effected by Patrick and the physicians in charge of him.

## **Methods**

In order to reconstruct Patrick's story, we adopted a biographical approach used by previous authors such as Thomas and Znaniecki (1998), who collated information obtained from various sources in order to reconstitute individual pathways.

The second author has met Patrick in 2008 during a public lecture he gave. Following this meeting, he has accepted a research interview as part of a research project to explore participants' feelings about how the results of clinical trials should be disclosed<sup>ii</sup>. The second author never met Patrick, but he followed the blog Patrick kept from 2006 up to his death in 2010, and the press articles, public conferences and television broadcasts where Patrick spoke about his situation and his treatment in the framework of his doctoral research. In 2017, the two authors decided to trace Patrick's therapeutic itinerary using evidence of various kinds: a personal interview conducted by Juliette Sakoyan with Patrick himself in March 2008, interviews conducted by Sylvain Besle with the physicians responsible for him in March 2017 and with his wife and son in February 2017<sup>iii</sup>. Thanks to all this material, including his own oral and written accounts of his pathway, we were able to conduct this research a few years after his death. We also had access to a set of e-mail messages exchanged between Patrick and other patients and their families. The results of this study were submitted to Patrick's widow, Dominique, who was asked to check them. She kindly corrected a few small errors which had crept into our account of her husband's treatment pathway.

## **A singular therapeutic itinerary**

Cancer care is entirely covered by the French public health insurance system. Despite the existence of geographical disparities (Huguet 2020), cancer patients have access to Comprehensive Cancer Centers (CCCs), University Hospitals (CHU), and public or private hospitals which have specific authorisation from the French Cancer Institute to treat cancer. French patients can choose where to be treated, but the fully reimbursement of the cost of transport to a hospital for treatment is spatially limited to the specialised hospital or clinic closest to the patient's home. Cancer care is standardised following the Evidence Based Medicine rules and the French Cancer Institute guidance. Patients can be included in clinical trials in the hospital that manages their cancer care or in another one depending on the availability of the clinical trial. In the latter case, the sponsor of the trial covers transport fees.

Patrick's therapeutic itinerary started in 2003, when he was diagnosed with advanced lung cancer with a short-term fatal prognosis. At that time, he was 52 years of age, married with three children, and working as a self-employed businessman. During his working life, he held various occupations, including that of lobbyists in the field of healthcare. Since some of

his close relatives were doctors and medical research workers, and he was in touch with the world of medicine and familiar with the workings of the French healthcare system.

We have taken the concept of "therapeutic itinerary" here in the anthropological sense, to mean resorting to various medical systems in order to cure patients or at least to alleviate their symptoms (Fassin 1992). Patrick's quest for a cure did not include any alternative or traditional medical approaches, but he did try out some experimental treatments (clinical trials and unlicensed molecules). He underwent nine different forms of treatment in all, administered at four different hospitals, one of which was located in the United States (see figure 1<sup>iv</sup>). He was guided along this itinerary by the advice of his brother-in-law Pierre, an immunological research worker, and that of a hospital oncologist, Professor Albert, a friend of Pierre.

Patrick's itinerary consisted of five main periods, each of which included both critical situations and periods of stabilisation. Rather than involving a single "chronic turn", the chronicity of his illness included a whole series of turning points (Hughes, 1950) which changed his therapeutic pathway: the shock of the disease announcement; the first phase of conventional treatment that created a biographical disruption; the transition to an experimental treatment (ALPHA molecule) that led him to recover hope and a more normal life; the return to a conventional treatment with numerous side effects because of his resistance to the ALPHA molecule; the inclusion in the United States clinical trials (Trial X-1) which allowed a disease stability but also financial difficulties due to transatlantic travels; the possibility to be included in the same clinical trials in France (Trial X-2); the resumption of the disease progression which led to the use of conventional treatments.

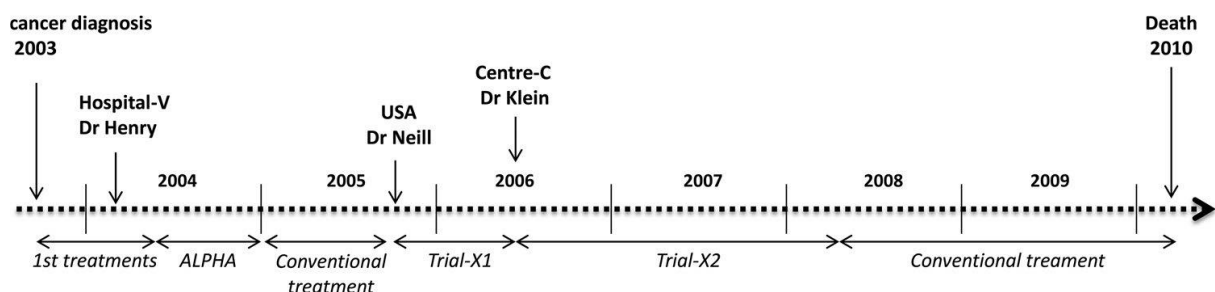


Figure 1. Chronology of Patrick's treatments.

### *Coming face to face with the disease*

The announcement (in 2003) that he had cancer with a poor prognosis came as a terrible blow to Patrick and his family. Patrick's cancer was not amenable to surgery, and he therefore had to undergo several types of chemotherapy. This first phase of treatment involved a "biographical disruption" (Bury 1982, 1991) in Patrick's life history. Since the treatment had to be started as quickly as possible, Patrick had to take a break from his work and reorganize his whole life around his treatment. The failure of the anticancer drugs (which

were both ineffective and toxic) administered immediately after his cancer was diagnosed induced him to embark on this complex therapeutic itinerary. At this stage (2003-2004), the physicians decided to refer Patrick to Dr. Henry (a medical oncologist) working at a small Hospital-V – where clinical research is not a common practice -, which was nearer to his home, in order to undergo a more palliative type of chemotherapy.

### *Looking for new therapeutic opportunities*

In response to these failures, Patrick turned to Pierre and his friend Professor Albert in order to obtain some further advice. Pierre described in his interview how he had discovered purely by chance that there existed an innovative molecule that we have referred to here as ALPHA. This drug was said to cure some cases of lung cancer, and was approved in the United States in 2004 but its potential benefits still remained to be confirmed. In addition, some clinical trials conducted in another country where the drug was already approved has shown that it has serious side effects and few benefits. The drug use in France has been authorised in the framework of special regulations called "temporary authorisation for use (ATU)" which make it possible under specific conditions to treat a patient with an unlicensed drug for a short period of time. This legal framework protects physicians who prescribe innovative drugs by reducing the risk of legal action.

From Patrick's point of view, Dr. Henry was strongly opposed at first to the use of this treatment because not enough was known about either its efficacy or its toxicity. Since ALPHA could not be prescribed by Dr Henry, it had to be ordered without going through the regular medical channels. Since it was available in France for indications other than Patrick's illness, Patrick managed to mobilise his own personal network to obtain the treatment, as he explained during his interview:

*So the drug was practically smuggled through by Albert, who passed it on to my father-in-law, who handed it on to me. It's just like a crime-fiction novel!*

Patrick said he therefore gave Dr. Henry with no choice and asked him to do everything he could to take over his follow-up. The relevance of this decision was quickly confirmed by the immediate benefits of the treatment.

This second, rather short period, which lasted for only 6 months in 2004, was certainly a turning point for Patrick, in terms of both his treatment and his personal life. It was during this period that the transition occurred from conventional treatment to more experimental approaches, and from his personal point of view, the hope of surviving longer led him to resume a more normal life and his previous activities.

However, his cancer began to resist the ALPHA molecule, forcing Dr. Henry to go back to prescribing conventional anticancer drugs, which were unfortunately not effective and had deleterious side effects on Patrick's quality of life. As he explained during his interview, the perspective of reaching the end of his life before long made it impossible at that stage for him to plan for the future. Meanwhile, Pierre was still looking for information about



potentially effective new means of treating Patrick's cancer. Pierre told us he heard about some phase 1<sup>v</sup> clinical trials (Trial X-1, a molecularly targeted therapy trial) being carried out in one of the biggest comprehensive cancer centres of the United States, for which Patrick might possibly be eligible. Pierre related the process: he helped to contact Dr Neill, the physician in charge of the clinical trial, and Patrick started negotiating directly with the CCC involved in order to take part in these trials. Before being included, Patrick had to travel to the States several times to meet Dr. Neill, and convince him that he met all the inclusion criteria. Once he had been officially included, he had to make the monthly round trip between France and the United States eleven times in all (2005-2006) in order to undergo this innovative treatment. As Patrick recounted, these repeated overseas trips had serious financial consequences, which obliged Patrick and his wife to sell their house. As previous authors have shown in the context of transnational cancer care, "investing the medical imaginary" which led to transnational therapeutic itineraries "has become a survival strategy" that underlies the huge financial efforts it entails (Kaspar 2019, 129). Despite these problems, this difficult period was followed by a period of stability.

During one of Patrick's monthly visits to the American hospital, his wife told us she found out that phase 2 trials were being carried out on the same drug in France, at Centre-C (a French CCC). For reasons concerning the production of scientific evidence, it is strictly forbidden to transfer any patients from phase 1 to phase 2 trials on the same drug. Despite this rule, Patrick told us he managed to get in touch directly with the head of the industrial firm involved in these trials, and to convince the person in charge of the trials, who eventually agreed to making an exception to the rule. Thanks to his persuasive negotiating skills and his previous professional experience, he was therefore authorised to join the trials in France (Trial X-2) at Centre-C (from 2006 to 2008) until the progression of his disease put an end to his participation. His enrolment in the French phase 2 clinical trial corroborates "that, in the clinic, the temporal arbitrariness of drug trials was a question of synchronization" (Arteaga Perez 2022, 11).

Dominique told us that during the fairly long period of two years which ensued (2008-2010) during which he received a conventional cancer treatment, Patrick applied to the French drug agency for permission to undergo a treatment which was not yet authorised in France. His application was refused several times before permission to use this drug was eventually granted just a few months before his death in 2010. This delayed approval illustrates the tragic gaps in access to therapeutic innovation highlighted in Arteaga Perez's work: "For people, there is simply no time to waste waiting if the drug is not available within the care infrastructure" (Arteaga Perez 2022, 8).

Patrick's pathway involved an alternating pattern of ups and downs at both medical and personal levels, and a new balance had to be found each time between his social life and his treatment. This therapeutic trajectory had most of the characteristics of chronicity described in the sociological literature, such as the importance of interactions and negotiations with the medical spheres (Glaser and Strauss 1975), the patients' strong involvement in the management of their symptoms and treatment, and their strategies for coping with their illness

(Bury 1991). But in the case of this patient living with advanced cancer, the trajectory was shaped by negative prognosis and uncertainty and the struggle to lengthen his own life. However, the singularity of Patrick's therapeutic itinerary, which led him several times up to the boundaries between hospital treatment and medical research, is a form of "personalisation from below" (Arteaga Perez, 2021) in the sense that his therapeutic itinerary is shaped by his efforts to access to not available drugs and biomedical innovation (like molecularly targeted drugs) which make a form of chronicity possible. As well as the cancer pathways analysed by Arteaga Perez (2022), chronicity of advanced cancer involves new forms of patients' work.

## **The patient's decision-making work**

Patrick sought actively for new therapeutic opportunities after the failure of the first chemotherapy he underwent, and went to great lengths to persuade his doctors to adopt these other options. We have called this form of patients' work "decision-making work" which involve identifying unknown medical solution and to convince physicians of their therapeutic values. Two stages in his pathway illustrate this form of work particularly clearly: that in which unlicensed treatment with ALPHA was applied, and that in which the patient was included in phase 1 trials in the United States (Trial X-1) and later in phase 2 trials in France (Trial X-2).

### ***Orchestrating access to therapeutic innovation***

By having ALPHA prescribed without the intervention of Dr. Henry, via his own personal medical network, Patrick disturbed the usual division of responsibilities, in which the patient's physician is responsible for prescribing patients' treatment. The role of his physician was reduced to monitoring its effects, as related by Dominique:

*Dr. Henry often said "OK then, I am going to be the good little soldier who deals with the basic jobs. But who is going to pick you up and put you together again when you are completely washed out after a treatment when it hasn't worked, when it has completely destroyed you? I'm the one who is always going to have to be there to recover the pieces". And it's true that he was always there afterwards...*

In order to make Dr. Henry agree to this proposal and to co-construct the decision-making, Patrick related he used medical arguments based on the benefit-to-risk ratio associated with the drug, claiming that the uncertainty of the benefits of ALPHA had to be weighed up against the certainty of death if he was given only conventional treatment.

As soon as the treatment with ALPHA started (2004), it had beneficial effects on the tumour. According to Patrick, Dr. Henry then changed his mind and began to support Patrick's efforts. The application of this treatment therefore involved several different actors, whose work was coordinated by Patrick: Pierre discovered the existence of the molecule, Professor Albert had the tablets supplied, and Dr. Henry was in charge of the medical follow-

up. Patrick acted as an intermediary, doing away with the need for contacts between these doctors and at the same time, eliminating any possible form of inter-professional competition (Castel, 2005). In fact, throughout Patrick's itinerary, Dr. Henry and Professor Albert had practically no direct contacts as explained by Dominique:

*Patrick spent a lot of time and sent a lot of e-mails and things reconciling Professor Albert's point of view with Dr. Henry's point of view, managing to make Dr. Henry reach the same conclusions as Professor Albert...*

Following the concept of "ontological choreography" proposed by Charis Thompson (2005), the analysis of Patrick's therapeutic itinerary highlights some patients' efforts to coordinate the work of the physicians, especially when the patients' decision-making work fragments the medical responsibilities. This patient coordination work is a form of patient's orchestration of clinical routines and guidance, medical knowledge, and unequal distribution of innovative drugs.

The second key period in Patrick's therapeutic itinerary corresponding to his inclusion in the American clinical trials (2005) illustrates Patrick's orchestration of his cancer care that involves a work of negotiation and persuasion. Once again, it was Pierre who discovered the existence of the Trial X-1 (a molecularly targeted therapy trial) and contacted the person in charge, Dr. Neill, who informed him about the conditions of inclusion, especially that it was necessary to check the presence of a biomarker in the tumour. A biopsy therefore had to be sent in for analysis to check whether this biomarker was present before Patrick could be included in the X-1 trials as he explained to us:

*(Dr. Neill sent me a message saying) "Yes we can include you in trial X, but first we need some biopsies which have to be prepared in a certain way. Can you have these biopsies done and send them to us?". On the Monday morning, I went to see Dr. Henry, saying: "Here's the reply, you must perform a fibroscopy and send the specimen to the Americans". Then Dr. Henry said that was fine, because for a while, Dr. Henry's attitude had completely changed and he had become highly efficient... His whole department had changed!*

With the help of Dr. Henry, Patrick himself therefore organised the preparation of this biopsy and had it dispatched to the States along with the results of all the other complementary tests required. He related an organisational hitch nearly prevented the biopsy from being posted, and thus almost put an end to Patrick's hopes of being included in these clinical trials.

*An unfortunate incident occurred on the day when the biopsies were to be collected to be posted to the United States: the employee at the reception desk kept the envelope with her when she went off for lunch, without telling her colleague. So when the messenger arrived, there was no envelope although it had been deposited there! So when I went back down at 2 o'clock and learned that the messenger had called and gone away empty-handed, that meant that the package would miss the one daily flight and that he [Dr. Neill] was not going receive the biopsy by 10 a.m. and that the ice it was packed in was going to melt! There's no need to say that I created havoc. So they all probably said:*

*what a pain in the neck he is, that man, he's just like a time bomb. We had better handle him with greater care from now on".*

This incident shows how committed Patrick was to participating, and how precarious the balance was on which his inclusion depended. When this biopsy was analysed, the biomarker of interest was not detected. Patrick told us he again applied to Pierre and Professor Albert, who managed to persuade Dr. Neill that a negative result did not completely rule out the presence of the biomarker. After further analyses, Patrick made a trip to the United States to introduce himself to Dr. Neill, who agreed to include him in the trial. Once again, the success of Patrick's active efforts to take part in this trial was due to his exceptional willpower and his ability to mobilise various sources of expertise in parallel thanks to his education, his familiarity with the medical world, the negotiation skills he acquired during his lobbying work in the field of healthcare, and his ability to personalise his medical relationship with Dr. Neill.

Patrick's fight to survive, which corresponds to what has been called "survival work" (Stetz 1993), was induced and reinforced by the biomedical imaginary (DeVecchio Good 2001) and the current medical discourse about the promise of innovation (Arteaga Perez 2022), as described by his wife Dominique:

*[Pierre] told him: "just hang on for another three years. In three years' time, there will be new molecules coming out (...) You will see, thanks to these molecules, cancer will be transformed into a chronic disorder (...) The molecules have to be replaced because the tumours are mutating (...) There will be other treatments so you must hold on, hold on".*

The levels of uncertainty surrounding cancer (Manderson 2011) are increased by the use of experimental treatments (Cortez and Halpin 2020), and this has resulted in several issues in terms of medical decision-making (Fox 1959). As Kerr et al have suggested, "biomedical knowledge has in many cases introduced new kinds of uncertainties, work and responsibilities to be navigated by cancer patients and professionals." (Kerr *et al.* 2018, 564). The "promissory rhetorics" of contemporary biomedicine (Swallow *et al.* 2020) has opened the way to negotiations between trial recruiter, physicians and their patients to consider new therapeutic opportunities (Kerr and Cunningham-Burley 2015). However, these negotiations require certain resources on the part of the patient and including a kind of "tinkering" approach in the medical practices adopted, as described below.

### ***Integrating the work of healthcare professionals at the frontier of standard care***

By coordinating the activities of various healthcare professionals, Patrick co-constructed the medical decisions which shaped his therapeutic pathway and hence, influenced the work of the doctors in charge of his treatment. In particular, his use of the unlicensed molecule ALPHA and his inclusion in the American trials were not quite in keeping with either the rules of evidence-based medical practices or with the scientific rules on which clinical trials are based: he not only convinced physicians to resort to an unlicensed

drug but also succeeded in bypassing the inclusion criteria imposed in clinical trials.

Patrick was nevertheless still registered at Hospital V, where Dr. Henry continued to attend to him although he had agreed to delegate the prescription of drugs and treatments to other physicians. The division of medical labour was far from being stable, however, since each new treatment and the evolution of Patrick's cancer gave rise to further negotiations and readjustments. Once the course of treatment with ALPHA had come to an end, for example, Dr. Henry again became responsible for prescribing Patrick's medical treatment and organising his care. Later on, when Patrick joined the phase 1 American trials, the work was again split up between the American hospital and Hospital V.

Patrick's long therapeutic pathway was therefore not characterised by the stabilisation of the healthcare professionals' roles, especially that of the physician in charge of coordinating interventions (Bergeron and Castel 2010). On the contrary, the work of the doctors had to be constantly reorganised in view of the therapeutic itinerary set up by Patrick himself.

Agreeing to breach French standard practices was therefore quite a risky step for doctors to take, but by relieving Dr. Henry of the need to actually prescribe the drug, Patrick reduced his responsibility, since he was only being asked to carry out the patient's follow-up. Patrick's request was all the more readily accepted by Dr. Henry as ALPHA was soon found to have beneficial effects on the patient. After his initial refusal, Dr. Henry therefore changed his attitude towards Patrick and helped him, for example, to take part in the phase 1 trials in the United States, both at the time of his application for inclusion in the trials (by performing a biopsy) and by taking charge of Patrick's medical follow-up during the trials.

The way in which Patrick distributed the medical work ended up by extending the doctors' scope for decision-making. Doctors included the possibility of adopting experimental treatments while reducing their own individual responsibility. The success of this pattern of distribution of clinical labour and fragmentation of responsibilities was also partly due to Patrick's ability to speak medical language. Thanks to his previous professional experience, the personal relationships he forged with health professionals, and his personal economic resources (such as those he devoted to being included in the X-1 clinical trial), he succeeded in making doctors in various places work together and keeping his therapeutic trajectory in the frontier zone.

### ***Giving his therapeutic pathway considerable publicity on the media***

In 2006, Patrick began to speak in public about his therapeutic experiences via a blog and in TV broadcasts and conferences. In contrast to the case of a British patient analysed by Arteaga Perez (2022) who publicised his situation in order to raise enough funds to obtain an innovative treatment, Patrick told us he gradually took active steps to promote patients' information and their access to innovative forms of treatment.

According to him, the fact that these efforts met with a large audience was confirmed by the number of patients who wrote back to encourage him or ask him for advice. He had no

hesitation in speaking directly to the heads of French hospitals, healthcare agencies and doctors, criticising them for their "poor practices", such as their failure to inform patients and pursue their treatment as long as possible, and the unnecessarily painful medical procedures they sometimes performed. On the other hand, he praised on his blog the work of doctors who were prepared to "innovate", giving their names to the patients who contacted him. He explained to us he conceived his blog as a platform encouraging cancer patients to insist on being included in experimental trials and transforming negative patients' perceptions of clinical trials. From his point of view, this strategy has worked because he told us that the number of patients who have been included in Trial X-2 has increased significantly after a post on his blog. In a way, he acted as a "patient-leader" as promoted by public health policies by influencing his community. Associations focusing on public health policies, such as National Cancer Moonshot (in the USA) or Plan cancer (in France) have indeed been calling for larger numbers of cancer patients to be included in clinical trials.

This form of activism is somewhat close to the "evidence-based activism" (Rabeharisoa, Moreira and Akrich 2015), but Patrick's activism did not fall within a collective movement. His aim was to give patients access to therapeutic decision-making work, especially in the later stages of the disease, by supporting them to elaborate their own medical opportunities. He encouraged them to be empowered by convincing physicians to broaden new therapeutics solutions, even if they are situated at the frontier of the Evidence Based Medicine, between research and care. Patrick's activism was intended to extend the benefits of the latest therapeutic innovations to a large proportion of advanced cancer patients. He was advocating in favour of patients' right to be properly informed about all the existing therapeutic possibilities and be included in experimental trials in order to maximise their chances of survival. By that time, the post-genomic era in which participation in trials becomes an established part of cancer care (Kerr and Cunningham-Burley 2015) has just begun and online platforms to facilitate access to clinical trials were just starting. Whereas the number of patients included in clinical trials has always been rather low, and reflects the social inequalities at work in the sphere of biomedicine (Burke and Mathews 2017).

## **Conclusion**

Patrick's therapeutic itinerary has provided us here with an example of a form of chronicity which is currently emerging in cancer patients' pathways. This chronicity is characterised by many turning points and the use of methods of treatment which amount to renegotiate the rules of Evidence-Based Medicine. In this situation, both patients and their doctors perform new forms of "work", which focus mainly on decision-making processes enlarging the range of possible treatments liable to serve the patients' fight for survival. The present case-study brings to light three particularly noteworthy aspects of this decision-making work.

The first aspect corresponds to the fact that the patient extended the range of therapeutic possibilities to include even options which were not within the scope of standard cancer care. Giving in to both “biotechnical embrace” (DeVecchio Good 2001) and “technological imperative” (Kaufman et al 2011) Patrick sought actively for alternative therapeutic options to the palliative chemotherapy he underwent at the beginning of his treatment. For this purpose, he mobilised various social spheres, some of which had nothing to do with the field of medicine as shown by Arteaga Perez (2022), such as the patient’s entourage and several virtual Internet communities informing people about the treatments available (Swan 2009).

The second aspect of this decision-making work consisted in orchestrating the application of the patient’s therapeutic choices, even when they did not correspond to standard medical practices. The patient had to persuade the medical teams that his decisions were worthwhile in order to ensure the continuity of his treatment. Doctors sometimes have to take a "tinkering" approach, experimenting and being creative (Mol 2008). In the case of Patrick, this "tinkering" approach to medicine involved practices such as twisting the rules for obtaining drugs or being included in clinical trials from which he should have been banned, which were at the fringes of medical standards.

Lastly, as we have seen, Patrick’s therapeutic itinerary was possible thanks to his own cultural, social and economic resources and his considerable dynamism. The exceptional nature of this case points to the existence of social inequalities in patients’ access to therapeutic innovations which result from the inequality of the research infrastructure available (Joseph and Dohan 2012), the lack of awareness of the resources required to participate in clinical trials (Burke 2014, Arteaga Perez 2022) and the gaps between national contexts especially in the access to genomic tests for drugs and personalized oncology at the time of Patrick’s therapeutic itinerary. Not all cancer patients have adequate cultural, social and economic resources to search for alternative biomedical options, to assume “the role of users as stakeholders enabling biomedical innovation” (Arteaga Perez 2022, 10), and to organise their healthcare pathway as Patrick did by moving away from the organisation of cancer care. Moreover the centrality of Patrick’s activism to explain his success to access new therapeutics emphasis both the issue of the healthcare disparities link to patients’ involvement (Sinding *et al.* 2011) and the issue of stratification within personalized medicine (Day et al, 2017; Arteaga Perez, 2022).

This case study shows that the making of chronicity in advanced cancer is contingent on certain conditions such as the accessibility of innovative therapies as suggested by previous authors. The “conditionally chronicity” of advanced cancer also depends on the patients’ capacity to search for alternative biomedical treatment, to engage in a decision-making work that encompasses the various aspects detailed, to orchestrate their cancer care pathway, and to deal with of uncertainty. Finally, the quest of patients to maintain the chronicity of their advanced cancer is a survival work sustained by the biomedical imaginary which expands the scope of hope. A hope which is sometimes, as was the case for Patrick, simply that of seeing his grandchildren being born.

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<sup>i</sup> For the sake of confidentiality, we have changed the names of the people, towns, hospitals and drugs mentioned here. No public information sources relating to Patrick’s case have been quoted here, and no excerpts from texts which can be consulted on the Internet have been presented directly in order to protect those involved in his story. These methods of reducing the identifiability of data are the same as those we used in Besle and Sarradon-Eck 2019.

<sup>ii</sup> This qualitative study (Sarradon-Eck et al. 2012) was part of a larger research project (« Retour aux patients des résultats des essais de recherche clinique : évaluation comparative d’une intervention sur internet versus suivi de routine ») funded by the Institut National du Cancer (National Cancer Institute - INCa "SEHS et recherche clinique" 2006 R080I IIAA).

<sup>iii</sup> All the interviews were conducted in French. The quotes presented here were translated by Dr Jessica Blanc.

<sup>iv</sup> Inspired by the figure that was originally published in Sarradon-Eck and Besle 2019.

<sup>v</sup> Clinical trials consist of research phases 1 to 3, which are designed to test the efficacy of new drugs. The first phase, which takes place immediately after the pre-clinical stage, is the most uncertain stage in these trials.