El mohtaref journal of sports Science.Social And Human Science

vol (08) N° (02) (2021)
p (551-534.)

Search information

Received 30/04/2021
Accepted 13/06/2021

Printed ISSN: 2352-989X
Online ISSN: 2602-6856

Quality of life of patients with lung cancer

Feddane Siham [1*] Boudouh Mohamed [2]

[1] **Blida 2 university .Childhood and preschool education laboratory (Algeria),** s.feddane@univ-blida2.dz.

[2] **Blida 2 university , Childhood and preschool education,** mohamedbdh@gmail.com.

ABSTRACT

Lung cancer mainly occurs in older people. Most people diagnosed with lung cancer are 65 or older. The essential objective in the treatment of any cancer is to improve the quality of life of the patient, to cure the cancer when possible. Therefore, Every physician should routinely assess the quality of life of his/her patient before starting cancer treatment, since quality of life represents an important component in the disease's management and decisions regarding further treatment.

A scoping review was carried out with the purpose of to characterize scientific publications on the quality of life of patients with lung cancer in order to examine the existing body of knowledge of the subject, focusing on assessment instruments and methodological aspects. as articles were searched for in various databases (NCBI , Medline, SCIELO, PubMed).We included 16 publications published between 2007 and 2020, which included (n = 08) a cross sectional design . Five different instruments were used.

A difference in the methodology adopted in the studies, created a variation in the results of quality of life.

A methodological standardization to evaluate the quality of life of lung cancer patients and specific instrument are recommended.

Keywords: Oncology, Health, Quality of life, Lung Cancer, Elderly.

---

* *Corresponding author*

INTRODUCTION

Lung cancer is considered as one of the most common types of cancer worldwide, with approximately 2.09 million diagnoses made each year. According to the World Health Organization, it is the reason of around 1.76 million cancer deaths deaths (M.Prutkin & R. Feinstein, 2002). The American Cancer Society medical affirmed that a lung cancer it mainly occurs in elderly. The majority of people affected are around 65 years old and the average age of those diagnosed is 70 years old (American Cancer medical Society, 2019). 8% of new cancer diagnoses are people aged 85 or more more (American Cancer Society, 2019).

The essential objective in the treatment of any cancer is to improve the quality of life of the patient, to cure the cancer when possible, as well as alleviating or eliminating the symptoms that are most pronounced in the patient for an extended period (Momcicevic, Pejic, & Milosevic, 2016). The Constitution of the World Health Organization (WHO) defines health as "A state of complete physical, mental, and social well-being not merely the absence of disease" (WHOQO, 1997).

The term quality of life term in psychological and medical care field intersects with other terms close to it, such as: The health related quality of life, and with the definition of health itself, normal life or life satisfaction. the term quality of life is used broadly in research, often without any clear definition. In the field of health, interest in the quality of life has been stimulated by the definition of health proposed by the World Health Organization as a “state of physical, emotional and social well-being” and not just the absence of disease or infirmity (Mercier & Filion, 1987). ‘Health-related quality of life’ (HRQL) has been defined as including: “those attributes valued by patients including their resultant comfort or sense of well-being; the extent to which they were able to maintain reasonable physical, emotional, and intellectual function; the degree to which they retain their ability to participate in valued activities within the family, in the workplace and in the community” (DONOVAN, et al., 2002).

Every physician should routinely assess the quality of life of his/her patient before starting cancer treatment, since quality of life represents an important component in the disease’s management and decisions regarding further treatment (Momcicevic, Pejic, & Milosevic, 2016). Therefore, it is important to evaluate the quality of life of cancer patients and ensure that specific evaluation instruments are used. Health Related Quality of Life (HRQoL) is specifically concerned with health aspects along with taking into consideration general quality of life components (QoL). Furthermore, it generally covers subjective perceptions in relation to positive and negative aspects of cancer symptoms including physical, emotional, social and cognitive functions along with the treatment's side effects. Health related quality of life (HRQoL) was understood in different ways and therefore measured using different tools. One of those tools is the questionnaire of (EORTC QLQ-C30).The European Organization for research and treatment of Cancer (EORTC) has developed a supplementary unit for Lung Cancer Patients QLQ-LC13. He was the first module to be used in conjunction with the EORTC Core Quality of Life Questionnaire (EORTC QLQ - C30) and was published in 1994. This later evaluates symptoms and side effects of lung cancer treatment. It includes 13 typical symptoms of lung cancer such as: cough, pain, dyspnea, stomatitis, peripheral neuropathy and hair loss (Koller, Warncke, Hjermstad,, Arraras, Pompili, & Harle, 2015)

Even though many tools are available to measure concepts related to health-related quality of life (HRQOL). choosing the most appropriate QOL measure is the first objective in clinical research (Iravani, Jafari, Akhlaghi, & Khademi , 2018). Despite the fact that the QoL of patients is considered a critical endpoint in oncology that can also give valuable prognostic information to patients and clinicians, QoL continues to be evaluated infrequently in most clinic oncology practices apart from research studies. The problem isn't really related to the lack of the valid tools, it is rather the integration of QoL measurements into the different clinical practices. This will continue as long as QoL assessment is regarded as peripheral to the goal of standard clinical cancer therapy. This means that it is rational to systematically incorporate QoL quality of life assessment and management into oncology practices (DP, D, & ED, 2011).

The goal of the present study is to describe the relevant scientific publications, with the aim of uncovering and presenting current knowledge about the quality of life of patients with lung cancer, with an emphasis on the methodological aspects and assessment instruments.

2. METHOD

2.1 Study Design

For the purpose of this paper, we performed a scoping review .Although there is no definitive definition of what a scoping review is, the general consensus amongst authors is that Mays et al (2001) best describes a scoping review (CQUniversity Library n.d.). According to Mays et al (2001), scoping reviews or scoping studies aim “to map rapidly the key concepts underpinning a research area and the main sources and types of evidence available, and can be undertaken as stand-alone projects in their own right, especially where an area is complex or has not been reviewed comprehensively before” (N, E et J 2001). This method helps in identifying knowledge gaps in previous intellectual production as well as proposing recommendations for future research. The methodology of the scoping review in our study was based on the framework established by O’Malley, Arksey (2005). the canonical five steps in doing a scoping review described (prescribed?) by Arksey and O’Malley and outlined below most authors omit the last one, which Arksey and O’Malley indeed call an optional stage (l Dijkers 2015) :

1. Identify the research questions: what domain needs to be explored?
2. Find the relevant studies, through the usual means: electronic databases, reference lists (ancestor searching), websites of organizations, conference proceedings, etc.
3. Select the studies that are relevant to the question(s)
4. Chart the data, i.e. the information on and from the relevant studies
5. Collate, summarize and report the results.
6. (Optional) consult stakeholders (clinicians, patients and families, policy makers, or whatever is the appropriate group) to get more references, provide insights on what the literature fails to highlight, etc. The following question was defined: What is the current knowledge about the Quality of life of people with lung cancer, the evaluative instruments and the methodological aspects of the studies?

2.2 Search Strategies

Electronic databases have been chosen to be comprehensive and cover a wide range of disciplines. The research was conducted in February / March 2020 in four electronic databases, as follows :

1. National Center for Biotechnology Information including the fields of Biomedicine and Health (NCBI).
2. Medical literature analysis and retrieval system online Medline.
3. SCIELO online scientific electronic library.
4. Pubmed National Library of Medicine.

We collected articles that discuss the quality of life of patients with lung cancer which were published from 2007 to 2020 in the English language, without being restricted to a specific country, and there were no restrictions on the time of studies or methods of data collection. The inclusion criterion for selection by title/ abstract was: Quality of life in patients with lung cancer.

2.3 Study Selection

The full-text publications of potentially relevant articles were obtained. screening of full-text studies was performed using :
The exclusion criteria were: Literature / theoretical reviews articles. as well as articles aimed at validating research instruments and systematic reviews have been excluded.

2.4 Data Extraction

A qualitative analysis was carried out by describing the publications, and the important data were as follows: The data of interest were: author(s)/year; journal; language; population (age), place of recruitment; state/country; study design; assessment instruments and synthesis of results.

3. RESULTS :

Following the application of the inclusion and exclusion criteria,110 articles were identified, and after filter by article 60 remained. and after removal of duplicates and excluded article , 30 remained. Of the remaining articles, 14 were deleted with reasons: : Literature / theoretical reviews articles. as well as articles aimed at validating research instruments and systematic reviews have been excluded. After this process,16 articles met the established criteria and were included in the review.

Flow chart of the search conducted in electronic databases

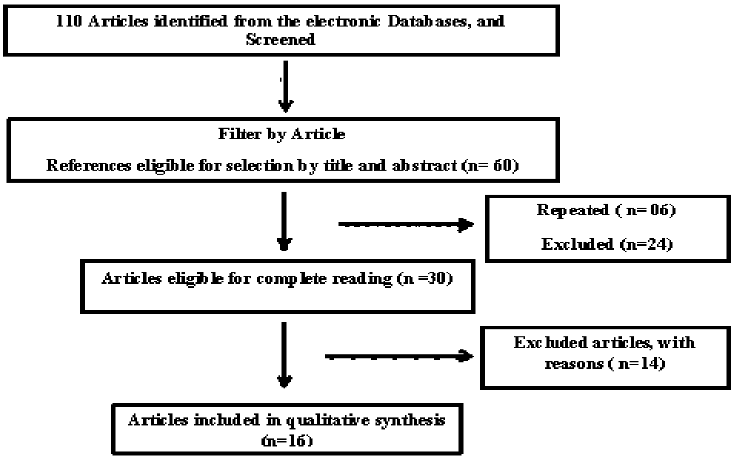

Fig. 1 . Flow chart of selection of included studies for the review.

Chart 1 and 2 summarize the studies published between 2007 and 2020, and Instruments used to assess quality of life. A total of 100% was published in English, and at 94.4% (number = 15), the samples were based on convenience, and were recruited into hospitals or cancer centers. Researchers used five instruments.

Chart 1. Description of studies included in scoping review in descending chronological order based on year of publication, 2020- 2007:

Chart 1 :Studies published between 2007 and 2020			
Authors, Year	**Study design**	**Study population**	**Place of patient recruitment/Country**
(van Montfort, et al. 2020)	Cross sectional design	(n=130,mean age = 68.3 ± 8.6 years ; 49٪ men)	November 2016 and april 2017 In the ETZ hospital (Elisabeth-Tweesteden Ziekenhuis), Tilburg The Netherlands.
(Pompili, et al. 2018)	Prospective data collection	Mean Age= 70 ±	April 2014 to September 2016 .The Leeds Cancer Centre, UK from
(Ioannis , et al. 2018)	prospective study	Age varies from 43 to 69 years with average 54 years	Pulmonary Department-Oncology Unit at G. Papanikolaou University Hospital of Thessaloniki
(Yu Hung RN , Min Wu RN and Pan Chen RN 2018)	a descriptive, correlational, cross-sectional study	age above 40 years,	two medical centerhospitals and one regional hospital in southern Taiwan.
(Niu and Zhang 2017)	Study of multiple cases	Age= 38~70 years old, average age 58.2 ± 3.9 years old.	Hospital of Zhengzhou University .china
(Momcicevic, Pejic and Milosevic 2016)	prospective	The age of the patients was 22 to 83 years (mean value was 61.83 + 8.94 years)	University Hospital Banja Luka
(Uanne Resende Avelino, et al. 2015)	Study of multiple cases	Patients (66±11.1)mean age=63.7 years	Public hospital in Rio de Janeiro, Brazil, 2013.
(C.Brocki, et al. 2015)	observational design	Mean age =65 years	the Department of Cardiothoracic Surgery, Aalborg University Hospital, between February 2006 and September 2009.

(Oliveira, et al. 2013)	Longitudinal	Patients 51-87 years (68±8.8)	Public hospital in São Paulo, Brazil, 2007-2009
(BMEDSC, BMEDSC and JOHANSSON 2012)	multi-centre randomised controlled trial	Mean age= 66 years	17 clinics in Sweden were included between October 1998 and January 2001.
(Mo¨ller and Sartipy 2012)	a prospective population-based cohort study	mean age 67 years	April 2006 to April 2008 at Karolinska University Hospital
(Lee, et al. 2011)	Cross-sectional	Patients: 30-85 years(63.6± 11.0) Controls:32-65 years(57.2± 6.7).	National Taiwan University Hospital (NTUH)Taiwan,2002
(Bezjak, et al. 2008)	a multicenter, randomized, controlled trial	Mean age=61 years	In 1994, the National Cancer Institute of Canada Clinical Trials Group (NCIC CTG)
(PM, et al. 2008)	a randomized study	Patients 42-82 years ,mean age=66 years	Sydney, Australia, between April 1999 and December 2000
(Brunelli, et al. 2007)	Prospective study	Mean age =65.9 years	Regional Hospital, Ancona, Italy
(Alonso Bredda Saad, José Botega and Felizardo Contrera Toro 2007)	Prospective study	55.5-13.4 years	Hospital das Clínicas of Universidade Estadual de Campinas, in Brazil. Between October 2001 and December 2003

Chart -2 Instruments used to assess quality of life in studies according to functions and items:

Instruments	Functions/items	Study
World Health Organization's Quality of Life (WHOQoL BREF).	Generic instrument of quality of life. The WHOQOL-BREF instrument contains 26 items, which measure the following broad domains: physical health, psychological health, social relationships, and environment.	(Lee, et al. 2011) (van Montfort, et al. 2020)
European Organization for Research and Treatment of Cancer Care Quality of Life Questionnaire(E ORTC QLQ-C30.	Specific instrument for cancer. The EORTC QLQ-C30 is an internationally validated cancer-specific HRQOL questionnaire. The 30-item EORTC QLQ-C30 version 3.0 is composed by five multi-item function ,six single-item symptom scales, and a two-item global quality of life scale (QL).	((Pompili, et al. 2018) (Yu Hung RN , Min Wu RN and Pan Chen RN 2018) (BMEDSC, BMEDSC and JOHANSSON 2012)(Bezjak, et al. 2008) (Uanne Resende Avelino, et al. 2015) (Oliveira, et al. 2013) (PM, et al. 2008)(Niu and Zhang 2017) (Momcicevic, Pejic and Milosevic 2016)
Quality of Life Questionnaire Lung Cancer Module (LC13), version 3.0	Specific instrument for lung cancer. The module is designed for use among patients receiving treatment with chemotherapy and / or radiotherapy. The QLQ-LC13 includes questions assessing lung cancer-associated symptoms, treatment-related side effects and pain medication. The lung cancer module incorporates one multi-item scale to assess dyspnoea, and a series of single items assessing pain, coughing, sore mouth, dysphagia,peripheral neuropathy, alopecia, and haemoptysis.	(Pompili, et al. 2018) (Yu Hung RN , Min Wu RN and Pan Chen RN 2018) (BMEDSC, BMEDSC and JOHANSSON 2012) (Bezjak, et al. 2008)(Uanne Resende Avelino, et al. 2015) (Oliveira, et al. 2013) (PM, et al. 2008)(Niu and Zhang 2017) (EORTC 2001) (Momcicevic, Pejic and Milosevic 2016)
EQ-5D (European Quality of Life-5 Dimensions Scale	is a measure of self-reported health outcomes that is applicable to a wide range of health conditions and treatments. It consists of two parts: a descriptive system (Part I) and a visual analogue scale (VAS) (Part II).-Part I	(Ioannis , et al. 2018)

	of the scale consists of 5 single-item dimensions. Part II uses a vertical graduated VAS (thermometer) to measure health status, ranging from worst imaginable health state to best imaginable health state.	
Medical Outcomes Study 36-item Short-form Survey (SF36)	Generic quality of life instrument. Contains 36 assessment items. The SF-36 assesses health-related quality of life in 8 areas.	(Alonso Bredda Saad, José Botega and Felizardo Contrera Toro 2007) (Moller and Sartipy 2012) (Brunelli, et al. 2007) (C.Brocki, et al. 2015)

Chart 03: describes concurrent studies (n = 7) and cross-sectional (n = 2) Prospective studies in terms of quality of life instruments, affected domains

Chart 3. Description of prospective and cross-sectional comparative studies according to quality of life (QoL) instrument, affected domains :

Authors and year of prospective concurrent studies	Instrument	QoL domain
(Ioannis , et al. 2018)	EQ-5D (European Quality of Life-5 Dimensions Scale)	Significant improvement was apparent when zoledronic acid was co administered in any treatment in patients with lung cancer. Sleep quality, fatigue and pain parameters also improved, with no positive impact on the symptoms of dyspnea**.**
(Niu and Zhang 2017)	EQ-5D (European Quality of Life-5 Dimensions Scale)	Before chemotherapy, the scores of living quality functional fields, fatigue and dyspnoea were high. After two cycles of chemotherapy, dyspnoea was obviously improved, while insomnia and loss of appetite were obviously increased. After four cycles of chemotherapy, the scores of body, role, emotion and social function were obviously reduced, while nausea and vomiting, loss of appetite, constipation and financial difficulty were worse. The physical status of part patients was relieved after chemotherapy, but their anxiety was quite

		obvious and their immunity and living quality were decreased.
(Uanne Resende Avelino, et al. 2015)	the (EORTC QLQ-C30) and (QLQ-LC13),	Physical and cognitive functioning scale scores differed significantly among chemotherapy cycles, indicating improved and worsened HRQoL, respectively. The differences regarding the scores for pain, loss of appetite, chest pain, and arm/shoulder pain indicated improved HRQoL
(Oliveira, et al. 2013)	the (EORTC QLQ-C30) and (QLQ-LC13),	After the chemotherapy , there was an improvement in general quality of life, as well as in the symptoms of dyspnea, insomnia, hemoptysis, cough, thoracic pain, pain in the arm/shoulder, and financial difficulty. There was a worsening on the functional scale which assesses role performance and symptoms of fatigue, nausea and vomiting, sensory neuropathy, pain in other parts, constipation, loss of appetite and alopecia.
(Mo¨ller and Sartipy 2012)	A SF-36 questionnaire	the baseline physical but not mental aspects of quality of life were associated with long-term survival after lung cancer surgery. Furthermore, deterioration in either physical or mental quality of life from baseline to 6 months after surgery was a significant risk factor for mortality.
(PM, et al. 2008)	the [EORTC-QLQ] C30) and (EORTC QLQ-LC13)	Surgery substantially reduced HRQOL across all dimensions except emotional functioning. HRQOL improved in the 2 years after surgery for patients without disease recurrence, although approximately half continued to experience symptoms and functional limitations. For those with recurrence within 2 years, there was some early postoperative recovery in HRQOL, with subsequent deterioration across most dimensions.

Authors and years of cross-sectional comparative	**Instrument Used to asses QOL**	**QOL domains affected. Results of comparative cross-sectional studies**

studies		
(C.Brocki, et al. 2015)	The SF-36	Individuals who were radically operated for lung cancer improved health-related quality of life one year after surgery, reaching values similar to a healthy reference population. The walked distance was positively associated with the subjective perception of physical functioning. an improvements after one year in SF-36 physical and mental component summary
(Lee, et al. 2011)	(WHOQoLB REF)	Patients with more advanced stages of NSCLC had poorer scores than did the healthy controls in the physical and psychological domains. Patients with disease duration of longer than 1 year tended to report higher physical and environment QOL than did those with NSCLC diagnosed for less than 1 year. Insight into one's own illness was associated with a higher utility, better social support, and improved financial resources.

4. Discussion and analysis of results

Lung cancer mainly occurs in older people. Just as chronological age is a risk factor for lung cancer, it is also less important than other factors in determining response, tolerance to treatment and its side effects .Most people diagnosed with lung cancer are 65 or older. The average age of people when diagnosed is about 70 (Association 2019), This elderly lung cancer patient population is special because of their variable baseline health and comorbidities (Ayyappan, Gonzalez and J. Woodlock 2011). Which explains the patients' age, which was generally over 58 years old..

That health-related quality of life instruments are designed to be applicable across a wide range of study community and treatment interventions. The instruments used varied between generic and specific. Health-related quality of life instruments are also designed to be relevant to specific treatment interventions or to a specific subgroup. Five different instruments were used to evaluate the quality of life of lung cancer patients, and the (EORTC QLQ-C30) was the most commonly used and intended for cancer patients in general ,it was used in nine studies (Chart 2). It was also attached to the QLQ –LC13 supplement module in six studies (Chart 2),because it is concerned with evaluating the quality of life of lung cancer patients as well as evaluating symptoms specific to disease and treatment. Both questionnaires (EORTC QLQ-C30 and QLQ –LC 13) are among the best advanced instruments. Montazeri, R. Gillis, & McEwen, 1998 are recommended to combine them together (Montazeri, R. Gillis and McEwen 1998), which is what most studies have adopted (BMEDSC, BMEDSC and JOHANSSON 2012) (Oliveira, et al. 2013) (Bezjak, et al. 2008) (Uanne Resende Avelino, et al. 2015) (PM, et al. 2008) (Momcicevic, Pejic and Milosevic 2016). The QLQ –LC13 questionnaire was considered as a clinically valid and useful instrument for evaluating symptoms of diseases and treatment in lung cancer patients participating in clinical trials when combined with the EORTC QLQ-C30 Quality of Life Questionnaire (Bergman, et al. 1994).

It was noted that pain and fatigue affect the quality of life of lung cancer patients and are considered among the most important problems experienced by patients, as each affects the patient's daily life such as physical activity, psychological activity, social and family life And the ability to do work and interact with others and on the way of life and thus to survive (Bezjak, et al. 2008) (BMEDSC, BMEDSC and JOHANSSON 2012) (Uanne Resende Avelino, et al. 2015) (PM, et al. 2008) (Niu and Zhang 2017). An improvement in physical function is an indicator of survival (Bezjak, et al. 2008). An instrument such as EORTC QLQ - C30 evaluates pain and fatigue among the symptoms of cancer patients. It is necessary to include an assessment of Health-related quality of life as a routine matter, which helps in comparing the different treatment regimens and thus choosing the most appropriate treatment (Oliveira, et al. 2013).

The negative effects of chemotherapy on quality of life are temporary, and improvement is likely to occur in most patients. Patients can also live with continued fatigue and associated functional limitations if doctors understand the range of health-related quality of life outcomes for long-term and short-term lung cancer treatment, to enable them to inform patients of possible outcomes of treatment alternatives and to plan continuous patient care (PM, et al. 2008). Many of the health-related quality of life questionnaires available today including the EORTC QLQ-C30 basic questionnaire with additional special (PM, et al. 2008) may not be appropriate for evaluating the experiences of cancer survivors and those without any disease because such questionnaires include elements Evaluate symptoms associated with treatment, for example (vomiting) that are generally not relevant to the period of stay after treatment. Among the generic and unspecified instruments, it measures the SF-36 health-related quality of life used in four studies (Chart 2), which study medical outcomes and monitor individual health. It is a measure of the self-report of functional health and well-being and evaluates the negative (illness / disability) and positive (well-being) aspects of health (Turano Mota, et al. 2019) .

Generic health quality of life instruments allow to evaluates quality of life in a comprehensive way. These questionnaires can be used in different groups (sick or non- sick subjects) (Mercier et Schraub 2005).To evaluates the improvement and deterioration of the physical, psychological and emotional aspects without taking into account the characteristics of the disease. As in the questionnaire of the QLQ -LC13 that evaluates symptoms of the disease and side effects of treatment (khalladi, et al. 2019) .To enable clinicians to inform patients about the potential consequences of the treatment alternatives available to them and for the planning of ongoing supportive care for this patient group. The prospective studies assessed the quality of life before and after chemotherapy, physiotherapy, and surgery, based on the generic and specific quality of life instruments. In one study (Niu and Zhang 2017) , the effect of chemotherapy and repeated treatment in the hospital affected significantly the patients physically and emotionally and this led to disrupting the family life and social activities. and influence of social value. This relates to symptoms: increased nausea, vomiting, insomnia and loss of appetite after chemotherapy. Also in the study by(Bezjak, et al. 2008),chemotherapy affected patients during treatment which exacerbated symptoms of fatigue, nausea and vomiting. This impairs the quality of life. The negative effects of treatment can be temporary, and disappear after the end of the treatment, and the quality of life for most patients improves. If side effects are controlled and adhering to effective complementary therapies that can help in dealing with disease and treatment (Turano Mota, et al. 2019). However, a study (Uanne Resende Avelino, et al. 2015) found out differences in the quality of life during treatment with regard to cognitive and physical abilities. In a study (Oliveira, et al. 2013) also find improvement in symptoms of dyspnea and hemoptysis after chemotherapy. In another study (Ioannis , et al. 2018) differences were noticed before and after taking Zoledronic Acid as improvement was observed regarding sleep quality and fatigue yet no positive effect on breathing symptoms was seen. Chemotherapy and adjuvant chemotherapy can improve the quality of life for lung cancer patients .In a study (Momcicevic, Pejic and Milosevic 2016), it was affirmed that only patients that go through a treatment of symptoms had a poor quality of life unlike those treated with chemotherapy. The Results after surgery showed that there was a difference in the quality of life of patients, so that a study (Brunelli, et al. 2007) found an improvement in the quality of physical and emotional life. As well as an improvement in the social component (Alonso Bredda Saad, José Botega and Felizardo Contrera Toro 2007) after 3 months of surgery. Provided that the cancer does not recur, so that patients diagnosed with recurring disease have observed a deterioration in all dimensions of quality of life except for emotional performance (PM, et al. 2008). Pompili, et al.,(2018) observed a decrease in the quality of life after surgery (Pompili, et al. 2018). Furthermore, Moller & Sartipy, (2012) and PM, et al., (2008) found a decrease in the physical and psychological field during the first 6 months after surgery with an increased risk of death. And after two years of surgery in half of the patients who survived (Mo¨ller and Sartipy 2012) (PM, et al. 2008). Studies comparing the quality of life for people with lung cancer with healthy individuals found a worse quality of life for cancer patients in the psychological and physical fields in the WHO Quality of Life Questionnaire (Lee, et al. 2011) (C.Brocki, et al. 2015) found significant improvement in physical and psychological performance and quality of life with moderate to large effect sizes after one year of surgery on the SF-36 scale (C.Brocki, et al. 2015).

Quality of life assessment is a very important issue in clinical practice, which helps in deciding to choose the appropriate treatment based on patient needs. There is no standardized instruments for assessing the quality of life for lung cancer patients approved by studies, which creates variation in outcomes. the adoption of different methodologies in the studies led to a difference in the quality of life results. Therefore, systematic standardization is recommended to assess the quality of life for people with lung cancer. Since patients involved in answering different questionnaires and procedures suffer from a serious disease that requires them to come to the hospital for treatment, the assessment instruments used are self-managed by patients in resting positions. Also, most results cannot be generalized due to the use of relatively small samples in most studies, which requires more studies with larger samples in the hospital environment because they are considered the most appropriate. A thorough search of the databases was carried out without being bound by time limits. We searched different databases. Studies were not included in languages other than English, as The studies included several countries located in different continents which is sign of cultural diversity. and This indicates a growing interest in research focusing on quality of life. We also used comprehensive search terms that defined a large number of studies.

Conclusion

Results variation in studies dealing with patients’ quality of life is due to the diversity in quality of life assessment instruments, methodological diversity in addition to the use of different samples in terms of age, disease stages and type of treatment provided. It is also recommended in this type of studies to use a standardized instruments to assess the quality of life of lung cancer patients, as well as homogeneous samples in terms of age, gender, stages of disease and treatment, with the exclusion of patients with comorbid diseases affecting Results. In the comparative studies reviewed, general evaluation instruments (SF-36) were used to assess the quality of life by comparing the patient group with the health group, as there was a difference in results between the two studies. The results of the study that used the WHO quality of life questionnaire in the physical and psychological field were worse, in addition to the absence of a significant difference in the quality of life between patients and the health group in the social and environmental fields while the study that used SF-36 found an improvement in the physical and psychological field. Which requires stressing the need to use specific evaluation instruments for lung cancer that take into account the specificity of the disease in addition to the emotional, functional and social fields and symptoms associated with lung cancer and treatment, with the need to improve these instruments by adding other fields for better and comprehensive evaluation. The quality of life assessment instruments are the best instruments for evaluating the impact of lung cancer on an individual's quality of life, but they may not be quite appropriate for evaluating the experiences of cancer survivors. These questionnaires include symptoms related to treatment that are not generally related to the period following treatment. There is broad agreement that HRQOL health-related quality of life is the functional impact of a person's condition and / or medical treatment. Hence, HRQOL's health related quality of life is subjective and multidimensional, and includes physical and functional function, psychological state, social interaction and physical sensation (Post 2014).

There were methodological differences between studies, and therefore a difference in the quality of life assessment instruments and hence a difference in the results. Recent studies have been methodologically robust.

5. Bibliography List :

1. Books :

American.L.A (2019),State of lung cancer,American Lung Association,Chicago;

EORTC (2001).,*EORTC QLQ-C30 Scoring Manual*,(3 ed.),Quality of Life Unit, Brussels;

N, M., E, R., & J, P(2001),*Studying the Organisation and Delivery of Health Services: Research Methods*,Synthesising research evidence;

2. Theses:

Septans, A.-L(2014), *Méthodologie pour l’évaluation de la qualité de vie*, Ecole Doctorale Environnement- Santé, l’Université de Franche-Comté,Paris ;

3. Journal article :

Alonso Bredda Saad, I., José Botega, N., & Felizardo Contrera Toro, I. (2007),Predictors of quality-of-life improvement following pulmonary resection due to lung cancer, *Sao Paulo Medical Journal, 125*(1), 46-49;

Avelino, Uanne Resende C., Marques Cardoso, R., Sales de Aguiar, S., & Sobreira da Silva, M. J (2015, march), Assessment of quality of life in patients with advanced, *Jornal brasileiro de pneumologia, 41*(2), 133-42;

Ayyappan, S., Gonzalez, C., & J. Woodlock, T (2011), Lung cancer in the very elderly: incidence, presentation, and diagnostic decision-making. A retrospective analysis at a teaching community hospital, *Journal of Community Hospital Internal Medicine Perspectives, 1*(3),1-6;

Bergman, B., Aaronson, N., Ahmedzai, S., S, K., M, S., & EORTC Study Group on Quality of Life, (1994), The EORTC QLQ-LC13: a modular supplement to the EORTC core quality of life questionnaire (QLQ-C30) for use in lung cancer clinical trials. *European journal of cancer, 30*(5),635-642;

Bezjak, A., W. Lee, C., Ding, K., Brundage , M., Winton, T., & Graham, B (2008, november 1), Quality-of-Life Outcomes for Adjuvant Chemotherapy in Early-Stage Non–Small-Cell Lung Cancer: Results From a Randomized Trial, JBR.10, *JOURNAL OF CLINICAL ONCOLOGY, 26*(31),5062-5069;

BMEDSC, M., BMEDSC, L., & JOHANSSON , B (2012, april 23), Health-related quality of life in advanced non-small cell lung cancer: correlates and comparisons to normative data, *European Journal of Cancer Care, 21*(5), 642-649;

Brunelli, A., Socci, L., Refai, M., Salati, M., Xiumé, F., & Sabbatini, A (2007, August), Quality of Life Before and After Major Lung Resection for Lung Cancer: A Prospective Follow-Up Analysis, *The Annals of Thoracic Surgery, 84*(2), 410-416;

C.Brocki, B., Westerdahl, E., JesperAndreasen, J., & S.R.Souza, D (2015), Improvements in physical performance and health-related quality of life one year after radical operation for lung cancer, *Cancer Treatment Communications, 4*,65-74;

Donovan,j., Bosch,R., Gotoh,M., Jackson,S., Naughton, M., Radley, S., etal (2002),Symptom and Quality of Life Assessment, *OAI*, 523;

DP,B.,D,G.,& ED,S (2011, Aug),Quality of life assessment as a predictor of survival in non-small cell lung cancer,*pubmed, 15*(11), 353;

l Dijkers, M (2015, december),What is a Scoping Review? *KT Update, 4*(1), 1-2;

Ioannis , T., Petsatodis, G., Potoupnis, M., Laskou, S., & Giannakidis, D (2018),Monitoring changes in quality of life in patients with lung cancer under treatment with chemotherapy and co administration of zoledronic acid by using specialized questionnaires, *Journal of Cancer, 9*(10), 1731-1736;

Iravani, K., Jafari, P., Akhlaghi, l., & Khademi , B (2018),Assessing whether EORTC QLQ-30 and FACT-G measure the same constructs of quality of life in patients with total laryngectomy, *Health and Quality of Life Outcomes*;

Ka-Lok Lo, C., Mertz, D., & Loeb, M (2014, april 1), Newcastle-Ottawa Scale: comparing reviewers' to authors' assessments, *BMC Med Res Methodol*, 14-45;

khalladi, R., Gargouri, I., Zedini, C., & Ben Saad, H (2019),Qualité de vie des patients Tunisiens atteints de cancer du poumon: étude descriptive (Quality of life of Tunisian patients with lung cancer: descriptive study),*LA TUNISIE MEDICALE, 97*(5),628-629;

Koller, M., Warncke, S., Hjermstad,, M. J., Arraras, J., Pompili, C., & Harle, A (2015, December 15),Use of the Lung Cancer–Specific Quality of Life Questionnaire EORTC QLQ-LC13 in Clinical Trials: A Systematic Review of the Literature 20 Years After its Development, *Cancer, 121*, 4300-4323;

Lee, L.-H., Chung, C.-W., Chang, Y.-Y., Lee, Y.-C., Yang, C.-H., Liou, S.-H., et al(2011), Comparison of the quality of life between patients with non-small-cell lung cancer and healthy controls,*20*(3),415-423;

Mercier, C., & Filion, J (1987, juin), Santé mentale au Québec La qualité de la vie : perspectives théoriques et empiriques Quality of life. *Santé mentale au Québec, 12*(1), pp. 135-143;

Mercier, M., & Schraub, S (2005),Qualité de vie : quels outils de mesure ? *27es journées de la SFSPM*,). Deauville , 420-421.

MILOŠEVIĆ, B., PEJIĆ, D., MOMČIČEVIĆ, D., KOVAČEVIĆ, P., STANETIĆ, M., & DRAGIĆ, S (2016), Quality of life in lung cancer patients due to treatment. *SIGNA VITAE, 11*(2),47-50;

Mo¨ller, A., & Sartipy, U (2012),Associations Between Changes in Quality of Life and, *Journal of Thoracic Oncology, 7*(1), 183–187;

Montazeri, A., R. Gillis, C., & McEwen, a. (1998, February). Quality of Life in Patients With Lung Cancer,A Review of Literature From 1970 to 1995, *CHEST Journal, 113*(2) ,467–481;

Niu, S., & Zhang, M (2017),Study on the effect of chemotherapy on physical status of patients with nonsmall-cell lung cancer. *Biomedical Research, 28*(6), 2466-2470;

Oliveira, P., Pereira, C., Belasco, A., & Bettencourt, A (2013, mai-june), Comparison of the quality of life among persons with lung cancer, before and after the chemotherapy treatment. *Rev*, *Latino-Am. Enfermagem, 21*(3), 787-794;

Pompili, C., Koller, M., Velikova, G., Franks, K., Callister, M., Robson, J., et al(2018, september) , EORTC QLQ-C30 summary score reliably detects changes in QoL three months after anatomic lung resection for Non-Small Cell Lung Cancer (NSCLC), *scienceDirect , 123*, 149-154;

PM, K., MT, K., RC, V., MJ, B., CA, P., JM, M., et al (2008, January) , Quality of life and survival in the 2 years after surgery for non small-cell lung cancer, *J Clin Oncol., 26*(2), 233-241;

Post, M. W (2014),Definitions of Quality of Life:What Has Happened and How to Move On,*Top Spinal Cord Inj Rehabil,20*(3), 167–180;

Turano Mota, R., Ferreira Júnior, H., Silva Pereira, F., Aparecida Vieira, M., & de Melo Costa, S(2019, aug) ,Quality of life of patients with lung cancer: A scoping review, *Revista Brasileira de Geriatria e Gerontologia*, *22*(2),1-13;

van Montfort, E., de Vries, J., Arts, R., G. Aerts, J., S. Kloover, J., & J. Traa , M (2020),The relation between psychological profiles and quality of life in patients with lung cancer,*Supportive Care in Cancer*,*28*, 1359–1367;

WHOQO (1997), Measuring quality of life, *Division of mental health and prevention of substance abuse world health organisation*;

Yu Hung RN , H., Min Wu RN, L., & Pan Chen RN, K(2018, may), Determinants of Quality of Life in Lung Cancer Patients. *journal of nursing scholarship, 50*(3), 257-264;

4. Internet websites:

Guadagno, A (2019, AUGUST 1), *World Lung Cancer Day 2019: Facts & Figures*. Retrieved from Cure: https://www.curetoday.com/articles/world-lung-cancer-day-2019-facts--figures. (consulted on March 2020).

American Cancer Society medical(2019), ABOUT LUNG CANCER:https://www.cancer.org/cancer/lung-cancer/about/what-is.html(consulted on March 2020).

American Cancer medical Society (2019), ABOUT LUNG CANCER: https://www.cancer.org/cancer/lung-cancer.html(consulted on March 2020).

Library, C (n.d.), Systematic Review,CQUniversity Library: https://libguides.library.cqu.edu.au/c.php?g=849703&p=6160857(consulted on March 2020).