

ORIGINAL ARTICLE

Characteristics of professionalism of specialists and advantages of multidisciplinary teams in thyroid cancer: Results of a national opinion survey[☆]



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Received 18 August 2018; accepted 31 October 2018

Available online 2 March 2019

KEYWORDS

Multidisciplinary team;
Thyroid cancer;
Health care;
Opinion survey

Abstract

Introduction: The opinion of professionals about multidisciplinary teams (MDT) in thyroid cancer has not been studied in Spain. This study was intended to ascertain the opinion of specialists about the characteristics of the professionals and the advantages provided by these teams.

Methods: A survey was designed to assess the opinion about the characteristics of professionalism and the advantages of MDT for patients, professionals, and the health care system. The survey was posted online from November 15, 2017 to February 15, 2018.

Results: A total of 226 surveys were evaluated. The ability for teamwork was considered the most important characteristic to be met by professionals by 37.2% of respondents, while scientific competence was the most important indicator of professionalism for 37.6%. More than two thirds of specialists felt that MDTs improve the choice of treatments and diagnostic procedures, decrease clinical variability, facilitate implementation of clinical guidelines, improve ongoing training, and increase patient satisfaction and hospital prestige. The degree of agreement with the advantages of MDTs was significantly higher among specialists who had a MDT at their hospitals.

[☆] Please cite this article as: Díez JJ, Galofré JC, Oleaga A, Grande E, Mitjavila M, Moreno P. Características de profesionalidad de los especialistas y ventajas de los equipos multidisciplinares en cáncer de tiroides: resultados de una encuesta de opinión nacional. Endocrinol Diabetes Nutr. 2019;66:74–82.

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PALABRAS CLAVE

Equipo multidisciplinar;
Cáncer de tiroides;
Atención sanitaria;
Encuesta de opinión

Conclusions: The overall opinion of professionals on the MDT model is highly favorable. Hospital managers and health care authorities should take these facts into account in order to encourage and support implementation of these teams.

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Características de profesionalidad de los especialistas y ventajas de los equipos multidisciplinares en cáncer de tiroides: resultados de una encuesta de opinión nacional

Resumen

Introducción: En nuestro país no se ha estudiado la opinión de los profesionales sobre los equipos multidisciplinares en cáncer de tiroides. El objetivo de este estudio ha sido conocer la opinión de los especialistas sobre las características de los profesionales y las ventajas que aportan estos equipos.

Métodos: Se diseñó una encuesta para valorar la opinión sobre las características de profesionalidad y las ventajas de los equipos multidisciplinares para pacientes, profesionales y sistema sanitario. La encuesta se mantuvo activa *online* del 15 de noviembre de 2017 al 15 de febrero de 2018.

Resultados: Se recibieron 226 encuestas. La capacidad para trabajar en equipo fue considerada la característica más importante que deben cumplir los profesionales por el 37,2% de los encuestados, mientras que la competencia científica fue el indicador de profesionalidad más importante para el 37,6%. Más de 2/3 de los especialistas opinan que los equipos multidisciplinares mejoran la elección de tratamientos y procedimientos diagnósticos, reducen la variabilidad clínica, facilitan la implementación de las guías clínicas, mejoran la formación continuada y aumentan la satisfacción de los pacientes, así como el prestigio del hospital. El grado de acuerdo con las ventajas de los EMD fue significativamente superior entre los especialistas que contaban con un EMD en su hospital.

Conclusiones: Estos resultados muestran una opinión globalmente muy favorable de los profesionales hacia el modelo de trabajo multidisciplinar. Los responsables de los hospitales y las autoridades sanitarias deberían tener en cuenta estos hechos para favorecer y apoyar la implantación de estos equipos.

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Introduction

Multidisciplinary teams (MDTs) are currently considered to be an optimum model for the care of cancer patients, since they offer decisions based on consensus among different specialists experienced in the management of neoplastic disease, and allow a holistic approach to patients and their disease from diagnosis and over long-term follow-up.¹⁻³ In the area of thyroid cancer, the Spanish Society of Endocrinology and Nutrition (Sociedad Española de Endocrinología y Nutrición [SEEN]) has recently published a consensus document on the definition, composition, requirements, structure and functioning of a MDT for the integral care of thyroid cancer patients. The document establishes requirements for specialists in MDTs, as well as objective indicators of professional quality.⁴

Multidisciplinary teams offer clinicians a cross-sectional organization model whose effectiveness in a real life setting largely depends on the motivation, interest, skills and professionalism of the participating members. It is therefore essential to directly know the opinion of the professionals

regarding the requirements of the participating members and the advantages afforded by MDTs in the management of thyroid cancer. Although some studies have been published analyzing professional perception of MDTs in reference to different tumor types,^{5,6} to the best of our knowledge this aspect has not been explored to date in thyroid cancer. We therefore designed this research project in order to ascertain the opinion of the professionals involved in the management of patients with thyroid cancer regarding the usefulness and advantages of MDTs.

Methods

Study design

Our aim was to ascertain the opinion of the different specialists regarding the characteristics required of those professionals wishing to belong to MDTs in thyroid cancer, as well as the advantages which such teams offer patients, professionals and the healthcare system. With this aim in mind,

we prepared a survey model that was evaluated in several discussion rounds among the authors through e-mail contact. A survey was finally designed, composed of three parts: one referring to personal and professional data; another addressing the professional characteristics of the team members; and a third part on the advantages of these teams. The design of the questionnaire and the specific aspects that the responders were asked about were based on a literature review which we carried out before the aforementioned consensus document, and which is reflected in [Tables 1 and 2](#) of the final article.⁴

The questionnaire was distributed through the SEEN website, since in Spain endocrinologists are the reference specialists in the diagnosis and monitoring of thyroid cancer. However, although this study was carried out under the auspices of the SEEN, its scope was not limited to its membership but was extended to all specialists dedicated to the care of patients with thyroid cancer. Accordingly, the questionnaire was also distributed through direct contact with surgeons, specialists in nuclear medicine, oncologists, radiologists, pathologists, radiotherapists, ear, nose and throat specialists, and biochemists. After the pertinent authorizations had been obtained, the survey was posted on the websites of the SEEN and the Spanish Society of Nuclear Medicine and Molecular Imaging (Sociedad Española de Medicina Nuclear e Imagen Molecular [SEMNM]) from 15 November 2017 to 15 February 2018. A direct link to the survey was enabled for those specialists who were not members of the SEEN or SEMNM.

Statistical analysis

Quantitative variables were reported as the mean and standard deviation for data with a normal distribution, and as the median and interquartile range (IQR) for nonparametric data. Normal distribution of variables was checked using the Kolmogorov–Smirnov test. Quantitative variables were reported as absolute values and percentages. The

Table 1 General characteristics of the professionals surveyed.

Characteristics	Number	Percentage
<i>Gender</i>		
Female	129	57.1
Male	97	42.9
<i>Specialty</i>		
Endocrinology	75	33.2
General surgery	64	28.3
Nuclear medicine	54	23.9
Medical oncology	10	4.4
Pathology	5	2.2
Clinical biochemistry	5	2.2
Radiology	4	1.8
Radiotherapeutic oncology	3	1.3
ENT	1	0.4
Others	5	2.2
<i>Type of hospital</i>		
Public	176	77.9
Private	12	5.3
Public and private	35	15.5
<i>Hospital size</i>		
District	14	6.2
General	60	26.5
Referral	133	58.8
<i>Professional category</i>		
Staff physician	154	68.1
Section chief	37	16.4
Head of Department	22	9.7
Others	13	5.8

chi-squared test and Fisher exact test were used for the comparison of proportions. A multivariate logistic regression model was used to assess the dependence of the presence of a MDT in the hospital upon other qualitative and

Table 2 General clinical activity and activity related to thyroid cancer.

Activity	Value	Number	Percentage
Percentage time dedicated to clinical practice	<20%	4	1.8
	20–50%	9	4.0
	50–80%	69	30.5
	>80%	142	62.8
Other non-healthcare activities	Teaching	95	42.0
	Research	79	35.0
	Management	46	20.4
Percentage clinical activity time dedicated to thyroid cancer	<20%	114	50.4
	20–50%	88	38.9
	>50%	21	9.3
Annual new cases of thyroid cancer at the hospital	Up to 20	59	26.1
	21 to 50	86	38.1
	Over 50	41	18.1
Thyroid cancer MDT at the hospital	Yes	167	73.9
	No	59	26.1

quantitative variables. Two-tailed tests were used in all cases, and statistical significance was considered for $p < 0.05$.

Results

Characteristics of the surveyed specialists

The survey was completed by 226 specialists (129 women) aged 28–70 years (mean 43.3 ± 9.6). Their personal and professional characteristics are reported in Table 1. The dominant specialties were endocrinology, general surgery, nuclear medicine and medical oncology. Only 9.3% of those surveyed dedicated more than 50% of their time to thyroid cancer (Table 2). A total of 73.9% of the participants reported the presence of a thyroid cancer MDT at their hospital.

Professionalism characteristics and indicators

A total of 37.2% of those surveyed considered the most important characteristic required of professionals in order to belong to an MDT to be the capacity to work as part of a team, while a holistic perspective of the disease was cited by 24.8% (Table 3).

Of the 6 professionalism indicators explored, scientific competence was considered to be the most important by 37.6% of the responders, while 23.5% considered teamwork to be the most important indicator (Table 3).

Advantages of multidisciplinary teams

Table 4 shows the degree of agreement of the professionals with the different advantages afforded by MDTs. With regard to the advantages for the patients, over two-thirds of the responders agreed on the following characteristics: an improved choice of treatments and diagnostic procedures, and lesser clinical variability. Over half of the responders agreed that MDTs reduce the number of consultations, increase patient satisfaction, and improve prognosis or survival. With regard to advantages for the professionals, over two-thirds of the responders agreed on all the items, except for the reduction of the risk of complaints. With regard to the advantages for the healthcare system, agreement by over two-thirds of the responders was only recorded with reference to the increased prestige of the hospital.

Comparisons between groups

A logistic regression analysis with the presence of MDT as the dependent variable showed the latter to be directly related to hospital size (OR 6.82 [95%CI: 1.89–24.61]; $p = 0.003$, for referral hospitals versus regional hospitals) and the type of hospital (OR 7.85 [1.19–51.76]; $p = 0.032$, for public hospitals versus private hospitals), but not to the number of new cases of thyroid cancer seen annually (OR 0.99 [0.98–1.01]; $p = 0.274$). We therefore sought to analyze the differences in the opinions of the different groups of professionals

Table 3 Specialist opinion regarding the characteristics required of professionals, belonging to an MDT and the indicators of professionalism considered important in such teams.

Characteristics	Number	Percentage
<i>Characteristics of the professionals</i>		
Capacity to work as part of a team	84	37.2
Holistic view of the disease	56	24.8
Ability to offer personal experience in joint decisions	36	15.9
Ability to adapt to consensus decisions	16	7.1
<i>Indicators of professionalism</i>		
Scientific competence	85	37.6
Teamwork	53	23.5
Capacity for self-criticism	21	9.3
Empathy	19	8.4
Learning capacity	12	5.3
Altruism	5	2.2

The data indicate the number and percentage of specialists who consider each characteristic or indicator to be the most important of its group. The professional characteristics and indicators of professionalism appear in hierarchical order.

classified not only by specialty, but also according to these variables (size and type of hospital, number of new cases per year and the presence of MDT).

No significant differences were found in the opinion of the participants regarding the characteristics of the professionals and the professionalism indicators in the three main specialties (endocrinology, general surgery and nuclear medicine), or in terms of hospital size, the type of hospital, the number of new cases per year, and the presence of MDT (data not shown).

Hospital size, type of hospital, and the number of new cases per year had a minimal influence upon the opinion of the professionals regarding the advantages of MDT (Table 5). However, the degree of agreement regarding the advantages analyzed was highly significant in the group of professionals with a MDT at their hospital (Table 5).

Discussion

The present study offers the first analysis in Spain of the opinions of the different specialists regarding the professional characteristics required of members of MDTs and

Table 4 Agreement of the surveyed specialists regarding the benefits of MDTs for patients, professionals and the healthcare system.

Advantages of multidisciplinary teams	Number	Percentage
<i>For patients</i>		
Improved choice of treatments	184	81.4
Improved choice of diagnostic procedures	176	77.9
Lesser clinical variability	174	77.0
Fewer specialist visits	126	55.8
Increased patient satisfaction	124	54.9
Improved patient prognosis or survival	120	53.1
Shorter waiting times for patients	107	47.3
<i>For professionals</i>		
Facilitation of the adaptation of personal clinical practice to the recommendations of national or international guides	186	82.3
Facilitation of upgrading and improved ongoing training of professionals	184	81.4
Direct impact upon personal clinical practice	178	78.8
Increased professional satisfaction	164	72.6
Professional stimulus	163	72.1
Reduction of the risk of complaints	89	39.4
<i>For the institution and the healthcare system</i>		
Increased hospital reputation	162	71.7
Facilitation of communication with other healthcare centers	132	58.4
Attraction of patients from other healthcare areas	102	45.1
Increased satisfaction of hospital health authorities	97	42.9

The data indicate the number and percentage of specialists who agree with each of the proposed advantages.

Table 5 Agreement with the benefits of MDTs among the surveyed specialists classified by groups according to the hospitals' characteristics.

	Hospital size		Type of hospital		New thyroid cancer cases in the hospital			MDT in the hospital	
	District or general	Referral	Public	Private	<20	21–50	>50	No	Yes
<i>Benefits for patients</i>									
Improved choice of treatments	77.0	85.0	84.1	66.7	78.0	84.9	82.9	49.2	92.8 ^{***}
Improved choice of diagnostic procedures	74.3	80.5	78.4	75.0	71.2	82.6	80.5	47.5	88.6 ^{***}
Lesser clinical variability	74.3	82.5	79.5	58.3	71.2	82.6	78.0	45.8	88.0 ^{***}
Fewer specialist visits	54.1	57.1	60.2	58.3	57.6	54.7	63.4	33.9	63.5 ^{***}
Increased patient satisfaction	47.3	58.6	56.8	58.3	55.9	53.5	58.5	37.3	61.1 ^{**}
Improved patient prognosis or survival	52.7	54.9	55.1	41.7	47.5	59.3	56.1	27.1	62.3 ^{***}
Shorter waiting times for patients	45.9	50.4	50.5	41.7	42.4	48.8	51.2	25.4	55.1 ^{***}
<i>Advantages for professionals</i>									
Facilitation of the adaptation of personal clinical practice to the recommendations of national or international guides	83.8	82.0	85.8	75.0	81.4	88.4	75.6	50.8	93.4 ^{***}
Facilitation of upgrading and improved ongoing training of professionals	77.0	84.2	81.8	75.0	76.3	88.4	82.9	49.2	92.8 ^{***}
Direct impact upon personal clinical practice	71.6	84.2 [*]	81.3	66.7	72.9	87.2	75.6	42.4	91.6 ^{***}
Increased professional satisfaction	66.2	76.7	73.3	66.7	69.5	75.6	75.6	44.1	82.6 ^{***}
Professional stimulus	63.5	77.4 [*]	72.7	66.7	59.3	80.2	70.7 [*]	35.6	85.0 ^{***}
Reduction of the risk of complaints	31.1	44.4	40.9	33.3	33.9	47.7	39.0	18.6	46.7 ^{***}
<i>Advantages for the institution and the healthcare system</i>									
Increased hospital reputation	68.9	73.7	73.9	58.3	72.9	79.1	58.5	37.3	83.8 ^{***}
Facilitation of communication with other healthcare centers	50.0	62.4	57.4	58.3	47.5	66.3	65.9	37.3	65.9 ^{***}
Attraction of patients from other healthcare areas	37.8	49.6	45.5	41.7	40.7	50.0	46.3	18.6	54.5 ^{***}
Increased satisfaction of hospital health authorities	36.5	45.9	45.5	33.3	39.0	48.8	36.6	20.3	50.9 ^{***}

The data indicate the percentage of those surveyed who agree with each of the cited advantages in each group.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

the advantages of MDTs for thyroid cancer management. The average profile of those surveyed corresponds to specialists working in public referral hospitals and involved in eminently clinical activities, though many of them combine the latter with other activities such as teaching and research. Overall, the results obtained reflect a very positive attitude among the professionals toward MDTs, as has also been seen with reference to other tumor types.^{5,7}

The growing complexity of the management of medical information can turn healthcare professionals into technicians who merely apply algorithms automatically. This risk was intuited at the turn of the millennium by a number of scientific bodies that published the Physicians' Charter.⁸ The principles established in this charter defined the need to create MDTs to treat complex diseases (such as thyroid cancer), and rendered obsolete the concept of the "owning physician" as someone who views his or her patients as personal property and whose intervention is decided upon based on personal criteria alone. According to the charter, the patient comes first.⁹ We also emphasize that the participants in our survey considered the ability to work as part of a team to be the main requirement of an MDT member, followed by a holistic view of the disease. Scientific competence and teamwork were the most important indicators of professionalism of the 6 proposed. This suggests that the surveyed specialists consider that professionals must not only be competent, but should also meet a series of requirements regarding attitudes and commitment in order to carry out the tasks inherent to MDTs. These opinions persisted when analysis was made by subgroups according to specialty, hospital characteristics, and the number of new patients received annually. The availability of an MDT in the hospital likewise had no influence upon the opinion of the responders regarding the indicators of professionalism. All this suggests that MDTs require extra effort from the professionals, but also facilitate higher quality medical practice as a result of the professionalism of their members. Multidisciplinary teams improve how we practice medicine and generate better quality care.

In agreement with what is seen in other types of cancer, the responders considered MDTs to offer many benefits for patients, especially in terms of an improved choice of treatments^{10,11} and diagnostic procedures,¹² lesser clinical variability,¹¹ and increased patient satisfaction.^{13–15} Most of the responders agreed on these aspects. Improved survival has been suggested by several authors in patients with breast,² colorectal,¹⁶ esophageal¹⁷ and head and neck malignancies.¹⁸ However, some recent systematic reviews and meta-analyses have been unable to demonstrate a cause–effect relationship between MDT care and patient survival.^{19,20} It is therefore curious that over half of our responders agreed that MDTs improve patient prognosis or survival given that this is particularly difficult to demonstrate in the concrete case of thyroid cancer. However, it is also true that the concentration of cases in centers with MDTs may improve the outcomes, as reflected by the fact that surgeons with a larger number of thyroidectomies achieve fewer complications, shorter stays, and a lower cost per procedure.²¹

We again found no relevant differences in these opinions on dividing the patients according to the characteristics of the hospitals, with the exception of belonging to an MDT. Our results clearly show that specialists with an MDT at their center have a much more favorable opinion of the advantages of this model. This suggests that the professional experience of working in a multidisciplinary environment is the key factor that makes the advantages of this cross-sectional decision-making model more visible to professionals, while patient volume or hospital size has only a minimum impact upon specialist opinion.

Our data also indicate that the majority of the responders agreed on all the considered benefits for professionals, with the exception of a decrease in the risk of complaints. The recent literature reports improved experience in cancer surgery²² and in the management of infrequent tumors²³ among the specialists belonging to MDTs, as well as improved professional development and ongoing training,²⁴ and overall greater professional satisfaction.^{12,25} As in the above case, the proportion of responders agreeing on these advantages was clearly higher among those specialists with MDTs in their workplace.

Lastly, the increased prestige of the hospital was considered to be the most relevant advantage of MDTs for the healthcare system. An important aspect of multidisciplinary care is that it allows for the better use of healthcare information and communication systems,^{26,27} an aspect that appears to be accepted by over half of the professionals surveyed. By contrast, there appears to be no great agreement regarding an increase in satisfaction on the part of the hospital authorities or regarding the degree to which patients were attracted to the hospital from other healthcare areas. Similar observations have been made in other studies.²⁸

Our study is not without limitations. As expected, some specialties were underrepresented in our survey, which may condition the extrapolation of our results to healthcare professionals in general. The results of this study inherently reflect the subjective opinion of the surveyed professionals. Consequently, they do not offer objective clinical information as to the benefits for patients and the healthcare system. Moreover, the number of professionals working in private centers was relatively low, and so only limited conclusions regarding them can be drawn. Our survey did not explore the inconveniences of MDTs, the barriers or difficulties facing their implementation, or the ideas of the professionals for improving multidisciplinary decision-making processes.

As strengths of our study, mention should be made of the high number of responses obtained and the fact that the three key specialties in the diagnosis, the initial treatment and the follow-up of thyroid cancer were well represented in the survey. Despite the limitation posed by the lack of clinical data, our study shows that the responders appreciate the professionalism of the specialists and see the need and benefits of treating patients in a multidisciplinary context.

In conclusion, the present study suggests that the professionals participating in thyroid cancer management in Spain are aware of the importance of MDTs and have a very

favorable opinion regarding the advantages of this health care model for patients, professionals and the healthcare system. We believe that hospital management should favor the creation and development of these teams, provide official coverage of their meetings, acknowledge meeting time as care working time, and afford administrative support.⁴ Our results may help healthcare managers and authorities to promote the incorporation of MDTs in thyroid cancer management in centers that still do not have this model of care.

Conflicts of interest

The authors have no conflicts of interest in relation to this article.

Acknowledgments

The authors thank Sanofi Genzyme for assistance in distributing our survey among the Spanish hospitals that treat patients with thyroid cancer. This study has not received funding from any public or private entity.

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