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Hospital doctors' smoking behavior and attitude towards smoking cessation interventions for patients: a survey in an Italian Comprehensive Cancer Centre

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ABSTRACT

Purpose: Tobacco control guidelines recommend all healthcare professionals to ask patients about their smoking status and to offer them at least minimal cessation advice. However, few data are available about the daily practice of hospital clinicians who work with smoking cancer patients. This study assesses, in a comprehensive cancer center, the physicians' smoking habit, their clinical practice in offering a smoking cessation intervention to patients who smoke, and the training they received in this field.
Methods: A Web-based survey was sent to 285 physicians.
Results: The survey response rate was 75%. Sixty-two percent, 24%, and 14% of responders were never, former, and current smokers, respectively. Six percent of all responding physicians have already participated in smoking cessation training and 43% of them declared their willingness to be trained. Eighty-six percent of all responding physicians asked about the patients' smoking status, 50% routinely advised patients to quit smoking, and 32% assessed their motivation to do so. Smoking cessation guidelines were not followed mostly for lack of time, fear to increase patients' stress, and lack of smoking cessation training. Ninety-four percent of responding physicians knew the smoking cessation service for outpatients and 65% referred at least one patient, 66% of responding physicians knew the service for inpatients, and 36% of them asked for at least one intervention in the ward.
Conclusions: This study pointed out partial adherence of the physicians working in a leading cancer center to the smoking cessation guidelines. The clinicians' smoking habits did not influence the training and the clinical practice in offering patients smoking cessation interventions.

Keywords: Cancer patients, Healthcare professionals, Physicians, Smoking cessation, Smoking habits, Training

Introduction

The United States Public Health Service (USPHS) Guidelines recommend that all physicians ask their patients about their smoking status and offer at least minimal cessation advice to all patients who use tobacco (1). In the case of cancer patients, these recommendations are especially valuable. In this subgroup of patients, smoking cessation has been associated with improved survival, higher quality of life, and better outcomes of surgery, chemoradiotherapy, and biological therapies (2).

Moreover, among patients admitted to cancer centers, the percentage of smokers is roughly 24.5% (3), and adequate smoking cessation support may help patients overcome acute nicotine withdrawal syndrome (4).

Initiating smoking cessation during a hospitalization may be easier because of hospital smoking restrictions (5) as well as the vulnerability that the cancer patient may perceive as a motivation to quit (6, 7).

As we recently observed (8), Italian cancer centers and their clinical staff pay little attention to smoking cessation and to the care of smokers.

Some data are available about the relationship between the clinicians' smoking habits and their attitude towards

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offering a smoking cessation intervention to patients. Hospital-based surveys highlighted a lack of training and false beliefs about tobacco smoke and smoking cessation that in turns prevents clinical staff from offering pharmacologic and psychological support (9-12). Smaller studies regarding cancer centers revealed a similar situation, with fewer than half of cancer patients reporting assistance in cessation attempts (13-15).

The Fondazione IRCCS Istituto Nazionale dei Tumori (INT) is a member of the WHO Health Promoting Hospitals network. An outpatient smoking cessation clinic (SCC) and an inpatient smoking cessation service (ISCS) are available to help smoking patients to quit.

To guarantee widespread use of the ISCS interventions, nurses were trained to identify and document tobacco use, to provide minimal smoking cessation advice, and to promptly recognize symptoms of nicotine withdrawal. Free smoking cessation pharmacotherapy and psychological counseling are offered to patients motivated to stop smoking and to those who have acute nicotine withdrawal syndrome.

To build upon the success of the initiative, however, a more systematic involvement of clinicians is essential.

The aim of the present study was to describe physicians' smoking status, their attitudes towards smoking and smoking cessation services, and their patients' smoking cessation training and clinical practice; and the association between physicians' smoking status and the above attitudes, training, and clinical practice.

Indeed, results of this study could be useful in designing an effective intervention program targeted on smoking clinicians in order to help them to quit and to involve physicians in smoking cessation interventions for patients.

Methods

Procedure

Ad hoc Web-based software was used to carry out a survey among physicians working at INT. Doctors were invited to participate in the study with an e-mail signed by the INT Scientific Director. The e-mail contained information on data management and the link to the survey. Also attached were 2 files regarding the study's description and the hospital smoking cessation services for inpatients and outpatients. The software guaranteed respondent anonymity, while nonresponders received up to 3 reminders after 2 weeks.

Sample

All physicians working at INT who are involved in patient care were eligible for the survey.

The questionnaire

The questionnaire contained questions concerning the following:

1. Demographic information and physicians' tobacco use status
2. Physicians' attitudes towards smoking and smoking cessation
    a. If they are regularly exposed to secondhand smoke
    b. Their agreement with a free and facilitated access for health operators to smoking cessation clinics and smoking cessation drugs
3. Physicians' training in smoking cessation interventions
    a. Their attendance at courses on patient smoking cessation
    b. Their willingness to be trained
4. Physicians' clinical practice related to smoking cessation
    a. Practicing the first 3 recommendations of the USPHS guidelines (ask about patient's smoking status, advise for a smoking cessation, assess patient's motivation to quit) (AAA)
    b. The referral of at least one outpatient to the INT SCC
    c. The request at least one time for ISCS intervention in the wards
5. Current smokers' personal tobacco history, smoking habits (type and amount of tobacco products smoked per day and places where they usually smoke), and quit attempts
6. Former smokers' quit strategies.

Statistics

Responders' smoking status was presented by age and sex. Simple logistic regression was applied to assess the effect of smoking status separately on various indicators: attitudes towards smoking (secondhand smoke exposure, support for a plan to introduce free and facilitated access to the SCCs for health operators), training (willingness to be trained in patient smoking cessation and training attendance), and clinical practice (AAA, referral to SCC, and request for IDCS). Current smokers were chosen as reference category and results were presented as odds ratios with 95% confidence intervals.

Results

The survey was e-mailed to 285 clinicians, 20% of whom responded to the first e-mail; response rates at first, second, and third recall were 24%, 13%, and 18%, respectively, with an overall 75% response rate (213/285). Out of 213 responders, 115 (54%) were male and 135 (63%) were 20-50 years old.

Responders' smoking status by age and sex

Sixty-two percent, 24%, and 14% of responders were never, former, and current smokers, respectively. Current smokers and former smokers were more frequent among older physicians. Among female physicians, 81% of the youngest never smoked, while 43% of the oldest were former smokers (Tab. I).

Responders' smoking habits

Smoking habits among physicians are reported in Figure 1. Regarding all current smoking physicians (n = 30), 70% smoked 10 or fewer cigarettes per day; 20% smoked on the hospital premises (in outpatient surgery and emergency stairs), 60% on the balconies or in the courtyards of the hospital in full

TABLE I - Smoking status among physicians according to age and sex and overall

	Age 20-50 y		Age >50 y		Total		Total		Total
	M	F	M	F	Age 20-50 y	Age >50 y	M	F	
Current smokers	9 (13.9)	7 (10.0)	9 (18.0)	5 (17.9)	16 (11.8)	14 (17.9)	18 (15.7)	12 (12.2)	30 (14.1)
Former smokers	16 (24.6)	6 (8.6)	16 (32.0)	12 (42.9)	22 (16.3)	28 (35.9)	32 (27.8)	18 (18.4)	50 (23.5)
Never smokers	40 (61.5)	57 (81.4)	25 (50.0)	11 (39.2)	97 (71.9)	36 (46.2)	65 (56.5)	68 (69.4)	133 (62.4)

Values are n (%).

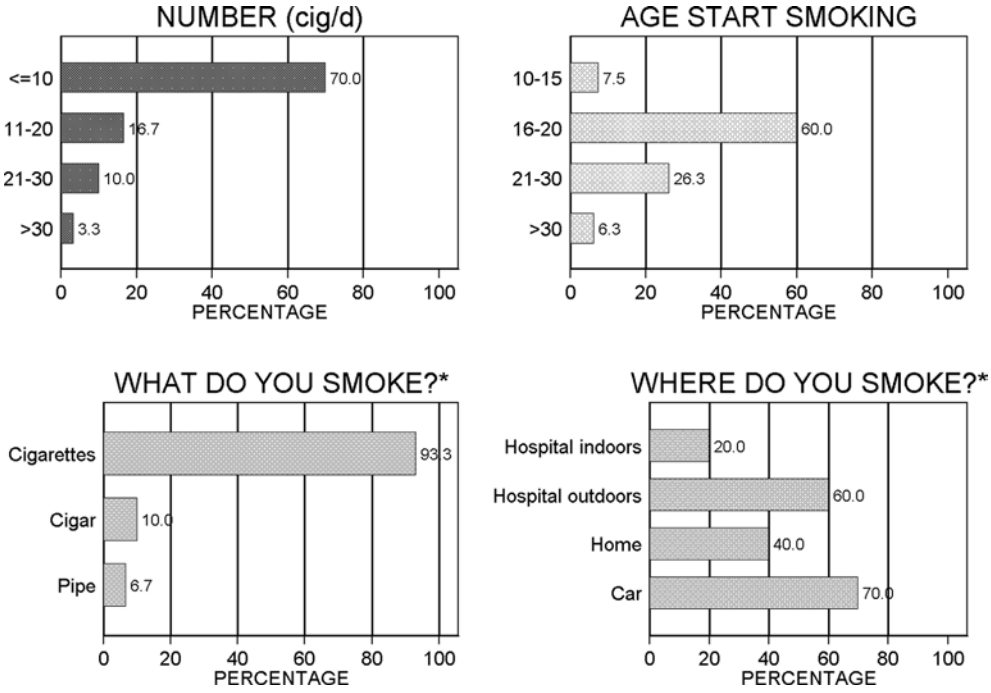

Fig. 1 - Smoking habits among current smokers (n = 30). *Multiple choice format questions.

view of the patients; 40% smoked at home and 70% inside their cars.

Thirty-three percent of smoking physicians declared their willingness to quit (data not shown). When we analyzed the quit attempts of current and former smokers (n = 80; 30 current and 50 former smokers), nearly all physicians who quit or tried to quit did it by themselves; only 2 former smokers and 1 current smoker had used some pharmacologic support, while none of them had asked for psychological help (data not shown in Tab. I).

Responder physicians' smoking status and attitudes, training for and smoking cessation clinical practice

Table II reports physicians' attitudes towards smoking and smoking cessation, their training, and their clinical practice, all according their smoking status.

Twenty-three percent of all participants were exposed to secondhand smoke. Former smokers reported being less exposed to smoke (12%) than never smokers (23%) or current smokers (37%).

The majority of physicians (92%), regardless of their smoking status, were in favor of a free and facilitated access to the SCCs and drugs for health staff.

As regards training in offering patients a smoking cessation intervention, 23% of all responding physicians had received a training proposal (Tab. II), 6% had attended a dedicated course, and 43% declared their willingness to be trained.

The examination of such attitudes in light of sex revealed that women were more interested in participating in smoking cessation training courses than were men (51% women vs 36% men; data not shown).

Out of the 213 responders, only 57 physicians (27%) followed all 3 recommendations (ask, advice, access); however, 184 physicians (86%) ask patients about their smoking status and record it in the medical charts, 50% routinely advise patients to quit, and 32% assess their motivation to do so (data not shown).

TABLE II - Attitudes, training, and clinical practice among physicians according to smoking status

	Current smokers (n = 30), %	Former smokers (n = 50), %	Never smokers (n = 133), %	Total (n = 213), %
Attitudes				
Secondhand smoke exposure[a]	36.7	12.0	23.3	22.5
Agreement with a free and facilitated access for health operators to SCCs and smoking cessation drugs	83.3	94.0	93.2	92.0
Training				
Receiving a training proposal	40.0	26.0	17.3	22.5
Training in patients' smoking cessation attendance	6.7	8.0	4.5	5.6
Willingness to be trained	36.6	46.0	42.9	42.7
Clinical practice				
AAA[b]	30.0	30.0	24.8	26.8
Referral to SCC[c]	53.3	68.0	66.1	64.8
Request for ISCS[d]	33.3	32.0	37.6	35.7

[a] Environmental tobacco smoke that is inhaled involuntarily or passively by someone who is not smoking.
[b] Practicing the first 3 recommendations of US Public Health Service Guidelines: "ask, advise, assess."
[c] Referral to the INT Smoking Cessation Clinic (SCC).
[d] Request the Inpatient Smoking Cessation Service (ISCS).

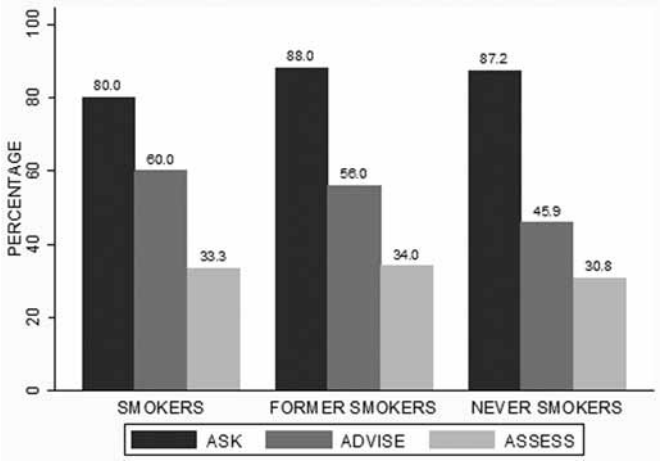

Fig. 2 - Clinical practice (ask, advice, assess) according to physicians' smoking status.

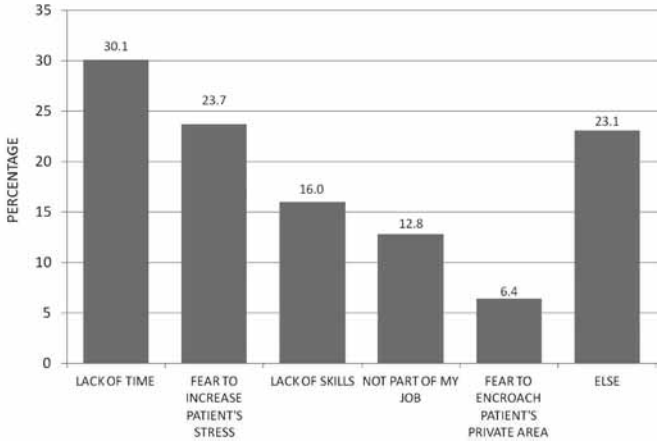

Fig. 3 - Reasons for not observing at least one of the 3 recommendations in the Smoking Cessation Clinic guidelines (n = 21).

Twenty-one physicians (10%) did not follow any of the first 3 recommendations in the guidelines (data not shown).

Sixty-five percent of responding physicians had referred at least one patient to the SCC and only 36% had asked for the intervention of ISCS in their ward.

While nearly the whole sample of responding physicians (94%) knew about the SCC in the hospital, only 66% knew about the ISCS, and this partially explains the limited referral to the services.

Figure 2 shows the percentages of the 3 recommendations (ask, advise, assess) according to smoking status. No major differences were observed according to smoking status except for the recommendation "advice," which seems more used by current and former smokers compared to never smokers.

Doctors who did not comply with at least one of the 3 recommendations (n = 21) were also asked with a multiple-choice format question to justify their noncompliance. The reason most frequently stated was lack of time (30%), then concern about increasing stress levels in patients (24%) and lack of skills in helping patients to quit (16%); only 6% of physicians reported concerns about invading patients' privacy (Fig. 3).

A number of clinicians (23%) justified noncompliance with guidelines with personal opinions such as "It is not worth the effort offering patients help to quit" and "It only serves to make them feel guilty" or "Smoking cessation is not important for cancer patients." Other clinicians explained noncompliance with guidelines' recommendations by forgetfulness, stating they had different clinical priorities and were not requested to treat pulmonary pathologies (Fig. 3).

TABLE III - Association between physicians' smoking status and attitudes towards smoking, training, and clinical practice

	Current smokers, OR	Former smokers, OR (95% CI)	Never smokers, OR (95% CI)
Attitudes			
Secondhand smoke exposure[a]	1	0.23[b] (0.07-0.72)	0.52 (0.22-1.22)
Agreement with a free and facilitated access for health operators to SCCs and smoking cessation drugs	1	3.13 (0.69-14.20)	2.75 (0.85-8.91)
Training			
Training in patients' smoking cessation attendance	1	1.22 (0.21-7.08)	0.66 (0.13-3.45)
Willingness to be trained	1	1.47 (0.58-3.72)	1.29 (0.27-1.22)
Clinical practice			
AAA[c]	1	1 (0.37-2.68)	0.77 (0.32-1.85)
Referral to SCC[d]	1	1.96 (0.73-4.14)	1.78 (0.77-5.25)
Request for ISCS[e]	1	1.14 (0.37-3.54)	1.22 (0.46-3.21)

[a]Environmental tobacco smoke that is inhaled involuntarily or passively by someone who is not smoking.
[b]Statistically significant.
[c]Practicing the first 3 recommendations of US Public Health Service Guidelines: "ask, advise, assess."
[d]Referral to the INT Smoking Cessation Clinic (SCC).
[e]Request the Inpatient Smoking Cessation Service (ISCS).

Association between smoking status and indicators of attitude, training for, and smoking cessation clinical practice

Eighty-seven percent of doctors who smoke stated that being a smoker did not influence their clinical practice regarding patients' smoking cessation (data not shown).

The examination of the associations between physicians' smoking status and the indicators of attitude, training, and clinical practice showed no statistically significant relationship but a significantly lower secondhand smoke exposure when comparing former to current smokers (odds ratio 0.23, 95% confidence interval 0.07-0.72) (Tab. III).

Discussion

Smoking habits and smoking cessation heavily impact on many outcomes in oncology patients; many studies demonstrated their influence on overall survival, quality of life, and outcomes of surgery, chemotherapy, radiotherapy, and biological therapy (2). Moreover, cessation advice should be part of routine clinical practice, particularly for physicians who work in a cancer center (2). In the present work, we examined the smoking habits of the physicians working in a comprehensive cancer center (INT) and their possible influence on attitudes, training, and clinical practice in smoking cessation interventions.

With respect to physicians' smoking status, in our cancer center we found a 14% smoking prevalence rate. Considering that it is possible that nonresponders are more frequently smokers than the respondents, the prevalence rate of smoking among clinicians may be close to the prevalence rate of smoking in the Italian general adult population (22%) (16). This smoking prevalence rate is lower than the prevalence rates among general hospital doctors (31%-39%) (12, 17, 18) and general practitioners (24%-31%) (19-22), but it is still too high for healthcare professionals working with cancer patients. This may reflect the relatively short time since implementation of the Italian legislation on secondhand smoke exposure in 2005; in fact, in countries with a longer history of antitobacco measures, the smoking prevalence among physicians is much lower (2%-6%), while in other countries it is even higher (up to 49%) (23, 24) than in Italy.

Data regarding physicians' smoking attitudes and behaviors are based on 30 responders only and this impedes generalizations. However, they are useful to plan an institutional tobacco control policy, to develop specific training, and to offer clinicians smoking cessation interventions.

The INT smoking physicians seem to have low tobacco dependence (70% smoke fewer than 10 cigarettes per day), but only 33% of them expressed willingness to quit. This is surprising, since up to 70% of the general population of smokers expresses willingness to give up smoking (25). However, we did not assess their physical dependence on nicotine with the Fagerstrom Test for Nicotine Dependence, and this limitation prevents us from drawing certain conclusions from this datum.

In our survey, we found that young smoking physicians were more frequently light smokers than were the older smokers, in contrast with the general population trend (16). Nevertheless, despite being employed in a cancer center, 20% percent of our clinicians still smoke inside the hospital premises (in outpatient surgery and on emergency stairs) and 60% of them smoke in public areas (on the balconies or in the courtyards) in view of the patients, in violation of the antitobacco policies of our Institute and showing no consideration for the 80% of Italians who support smoke-free policies in the outdoor areas of hospitals (26). Furthermore, many physicians smoke at home and inside their cars, disregarding the fact that these places are the primary sources of exposure to secondhand smoke for children and nonsmokers (27). The

exposure of our physicians to environmental tobacco smoke, particularly former smokers, is small, and this may be linked with their choice to quit and awareness of relapse risks.

The majority of current and former smokers (88.5%) is in favor of a free and facilitated access to the SCCs and pharmacologic support for health staff, maybe because they are aware of their responsibilities as role models. Nevertheless, as in the general population (16), only a small proportion of these clinicians tried to quit using a pharmacologic therapy and none of them asked for psychological support. Since 1988, the US Surgeon General stated that nicotine is a substance able to cause addiction (25) and later the WHO and the American Psychiatric Association (DSM-IV-TR) included nicotine addiction among substance abuse (28, 29). Subsequently, the scientific community classified smoking as a recurrent chronic disease (30) and demonstrated the efficacy of pharmacologic and psychological therapies in helping smokers to quit (31). Nevertheless, current and former smoker clinicians seem to underestimate the role of physical and psychological addiction and not to believe in the usefulness of quit smoking interventions.

The scientific literature highlights a lack of training in smoking cessation interventions, with trained physicians' percentages ranging from 5.7% to 60.9% (9, 13, 19, 21, 32-37).

In our study, a small proportion of clinicians had been invited to attend training in patients' smoking cessation and an even smaller number had attended a course. Nevertheless, 43% of INT clinicians wished to be trained and, even if in a cancer center a higher percentage would be desirable, it is sufficient to promote specific training for physicians. Good training could strengthen the necessary skills, help clinicians to reconsider some personal beliefs about nicotine addiction and smoking-related cancers, and solve frequent concerns about the interaction of quit smoking pharmacotherapies with cancer treatments or the fear of increasing the levels of stress of the patients, enabling oncologists to perform the appropriate smoking cessation interventions in this population. Furthermore, personal smoking habits did not influence the INT physicians' willingness to be trained in patient smoking cessation interventions. This means that the training could also be a good opportunity for clinicians to think about their own smoking behavior, to come to the decision of quitting, and to start a smoking cessation program.

While the scientific literature highlighted that the smoking cessation clinical practice of general practitioners and specialists should be improved (19, 32-38), our survey pointed at a partial adherence to USPHS guidelines, since the majority of physicians asked about patients' tobacco use status and recorded it in the medical chart, but only half of them advised patients to quit and only one third assessed the patients' motivation. Considering that the patient's smoking status is an essential part of the medical chart, our findings suggest that its recording is seen as a bureaucratic duty rather than the starting point for appropriate care and support.

While many studies pointed out that smoking doctors are less likely to initiate cessation interventions (19, 37, 39-41), we registered that the smoking habits of our oncologists have no influence on their smoking cessation in clinical practice. This is an encouraging finding that we link not so much with the widespread knowledge about the cancer-causing effects of tobacco smoke as with the presence of smoking cessation services within our institute that makes smoking patients' referral easier. Taking care of smoking cancer patients demands a long-term tobacco control strategy and oncologists have a pivotal role in this implementation (42).

Owing to the cross-sectional study design, causal links cannot be established from the associations shown in this study and future longitudinal studies are needed to increase the evidence regarding the hypothesis suggested by our results.

Another limitation was a potential selection bias due to nonresponders. Consequently our results may be nonrepresentative of all INT physicians, particularly as concerns the matter of tobacco use status. On the other hand, the percentage response rate was high (75%) and our clinicians were informed that data would be treated confidentially; we therefore believe that the data are representative of the respondents' actual habits, attitudes, and clinical practice.

In order to guarantee the anonymity of the respondents, we did not collect data on the departments in which they worked. This prevented us from observing how working with smoking-related cancers can influence physicians' habits.

The e-mail with the survey contained an attachment regarding the hospital smoking cessation services offered to inpatients and outpatients. To better interpret data about referral of smokers to the SCC and the ISCS by the clinicians, it was also useful to assess the clinicians' knowledge of those services. In this context, providing this information was not entirely appropriate. However, on one hand the questions explicitly investigated clinicians' knowledge before they took the survey and, on the other hand, it was important for us to present the smoking cessation services in this communication signed by the Scientific Director.

Nurses play a key role in tobacco control and in our cancer center they had been involved in training and clinical practice in patient smoking cessation since 2006. We chose to limit the survey to medical doctors with the institutional aim to involve them and to promote better assistance for smoking cancer patients.

We hope that these results may help our cancer center develop specific projects concerning tobacco smoking addressed to all health operators working with oncologic pathologies. A cancer center in which all doctors and nurses offer minimal advice while SCC staff members provide pharmacologic support and prolonged counseling may be effective for patients and may lead doctors to be more inclined to provide brief smoking cessation interventions.

Smoking cessation support offered with a nonjudgmental approach is the best course of action in order to avoid discouraging cancer patients motivated or urged to stop smoking during a difficult period of their life. The same approach is also the most effective way to involve all health operators in a clinical practice for which they do not feel prepared and to help the smokers among them get involved.

This kind of survey is a useful tool to achieve those aims and might be profitably conducted in every cancer center.

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