TEACHING AND LEARNING MEDICAL ETHICS

Should cancer patients be informed about their diagnosis and prognosis? Future doctors and lawyers differ

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Objectives: To compare attitudes of medical and law students toward informing a cancer patient about diagnosis and prognosis and to examine whether differences are related to different convictions about benefit or harm of information.
Setting and design: Anonymous questionnaires were distributed to convenience samples of students at the University of Geneva containing four vignettes describing a cancer patient who wishes, or alternatively, who does not wish to be told the truth.
Participants: One hundred and twenty seven medical students and 168 law students.
Main outcome measures: Five point Likert scale of responses to the vignettes ranging from "certainly inform" to "certainly not inform" the patient.
Results: All medical students and 96% of law students favoured information about the *diagnosis* of cancer if the patient requests it. Seventy four per cent of medical students and 82% of law students favoured informing a cancer patient about his or her *prognosis* ($p = 0.0003$). Thirty five per cent of law students and 11.7% of medical students favoured telling about the *diagnosis* ($p = 0.0004$) and 25.6% of law students and 7% of medical students favoured telling about the *prognosis* ($p < 0.0001$) even if the patient had clearly expressed his wish not to be informed. Law students indicated significantly more often than medical students reasons to do with the patient's good, legal obligations, and the physician's obligation to tell the truth, and significantly less often than medical students that their attitude had been determined predominantly by respect for the autonomous choice of the patient.
Conclusion: Differences in attitudes according to the type of case and the type of studies were related to convictions about the benefit or harm to the patient caused by being given information. The self reported reasons of future physicians and future lawyers are helpful when considering means to achieve a better acceptance of patients' right to know and not to know.

A large majority of both healthy adults and cancer patients from different countries want to be told about their diagnosis and prognosis.[1–6] In North America and Northern Europe, attitudes of physicians towards telling cancer patients about their diagnosis have changed remarkably in the past 30 years. Before 1960, the majority of American physicians usually did not tell cancer patients about their diagnosis.[7 8] For roughly the last 20 years, however, most physicians in the United States and Northern Europe have reported that they usually inform a cancer patient about his or her diagnosis.[9 10] But significantly fewer physicians from these and other countries usually tell patients the full truth about the prognosis of their disease.[1 10 11] Studies in Eastern Europe and in Japan have shown that physicians from these parts of the world usually do *not* inform patients about either the diagnosis or the prognosis of cancer.[3 10 12 13] Changes towards more disclosure have been reported from Japan recently.[14]

Besides defending the right to know, most ethicists defend also a right *not* to know,[15–19] although a different position is held by Buchanan. He argues that a contract between patient and physician *not* to tell the truth, even if both have given consent, cannot be valid.[20] Little is known about physicians' attitudes towards a patient who does *not* want to be told about his diagnosis and prognosis.

Moreover, most studies have focused on a quantitative description of the percentages of physicians who inform or do not inform a patient. Few data exist[1] about the reasons why physicians respect or do not respect the wishes of competent patients to know or not to know about their diagnosis and prognosis and whether reasons reported by physicians differ from the reasons that patients, informed laypeople, or lawyers would indicate themselves.

HOW TO EXPLAIN DIFFERENCES BETWEEN ATTITUDES

The "mysterious change"[21] in physicians' attitudes towards disclosure of cancer diagnosis observed in the United States[9] and Northern Europe between 1960 and the seventies has in general been attributed to the growing respect for patient autonomy. The new requirement of informed consent that arrived on the American scene in two separate contexts, for daily practice in 1957, and for clinical study in 1966, is thought to have shifted attention to a duty to respect the autonomy of patients.[22] According to this theory, persisting differences between countries in attitudes towards patient information could be explained mainly by culturally different appreciations of patient autonomy as an overriding value. This theory does not, however, provide sufficient explanation of the fact that even in countries which place a high value on patient autonomy many physicians still do not inform patients about their prognosis.

Another hypothesis would be that the observed "mysterious change" of attitudes towards truth disclosure about cancer diagnosis does not primarily reflect physicians' greater respect for patient autonomy but is mainly due to a change towards a more positive evaluation of the consequences of informing. According to this hypothesis, paternalistic concerns still have an important influence on physicians'

Table 1 Differences between characteristics of medical and law students; No (%)

Characteristic	Medical students (M)			Law students (L)			p* M/L†
	(n^{M}=127)	(n^{M1}=64)	(n^{M2}=63)	(n^{L}=168)	(n^{L1}=75)	(n^{L2}=93)	
Mean age (SD)	24.4 (8.2)	24.7 (3.8)	24.2 (2.4)	22.1 (4.1)	22.1 (1.5)	22.1 (5.3)	<0.001
Minimum/maximum	21/52	22/52	21/35	18/52	19/28	18/52	
Study year,	5.0 (0.09)	5.0 (0.1)	5.0 (0.0)	1.7 (0.8)	2.4 (5.9)	1.1 (6.2)	<0.001
mode/range	5/1	5/1	5/0	1/4	2/2	1/4	
Ethical training§	75 (59.5)	58 (90.6)	17 (27.0)	13 (7.9)	4 (5.3)	9 (10.0)	<0.001
Culture‡:							–
USA/Canada	5 (4.1)	1 (1.6)	4 (6.6)	6 (3.6)	2 (2.7)	4 (4.4)	–
North-Europe	10 (8.1)	6 (9.7)	4 (6.6)	27 (16.3)	16 (21.3)	11 (12.1)	0.04
Switzerland	85 (69.1)	47 (75.8)	38 (62.3)	91 (54.8)	40 (53.3)	51 (56.0)	0.01
South-Europe	15 (12.2)	5 (8.1)	10 (16.4)	29 (17.5)	11 (14.7)	18 (19.8)	–
Other	8 (6.5)	3 (4.8)	5 (8.2)	13 (7.8)	6 (8.0)	7 (7.7)	–

*t-test for age and study year, $\chi^2$for others, p shown if ⩽0.05 ("–" means p>0.05).
†No significant (p⩽0.05) differences were found when comparing groups from the same faculty, except for ethical training of medical students (p<0.001).
‡Self-reported identification with cultural origin. Some students did not indicate their culture.
§Medical students indicated participation either in the medical ethics seminary taught to 2nd year students or in the ethics part of the legal medicine course.
Law students: various kinds of teaching in high school or in other, e.g. philosophical or theological, faculties.
Group M1 : 64 medical students at the end of their 5th year in 1996.
Group M2 : 63 medical students at the beginning of their 5th year in 1996.
Group L1 : 75 first to fourth year law students from an "international law" lecture in 1996.
Group L2 : 93 mostly first year law students from a "law and medicine" lecture in 1996.
Authors' note: This table is adapted from one already published in Medical Education.[24]

attitudes. Because of advances in cancer treatment, telling about a cancer diagnosis is no longer equal to announcing certain and imminent death. Patient compliance is needed to assure treatment efficiency. Physicians who are convinced that communicating the diagnosis of cancer is beneficial will inform patients who ask to be told and even patients who would have preferred not to know about their diagnosis. By contrast, disclosure of a poor prognosis is still judged harmful[23] and therefore many physicians do not favour truthful information about poor prognosis.

Table 2 Characteristics that make acting according to patient's choice more likely (+) or less likely (–); p value according to the Mann-Whitney rank sum test, mentioned if p</=0.05

	Diagnosis desired (case 1)	Prognosis desired (case 2)	Diagnosis not desired (case 3)	Prognosis not desired (case 4)
Group L1 (as compared to group L2)			0.01–	0.009–
Group M1 (as compared to group M2)			0.02+	0.03+
Medical students (comp. to Law stud.)		0.0003–	0.0004+	<0.0001+
Ethical training		<0.0001–	0.004+	<0.0001+
Law students: ethical training		0.009–		0.004+
Medical students: ethical training	0.03+	0.03–		
Age >22		0.008–	0.0008+	0.001+
Age >24			0.01+	
Medical students: age >24			0.05+	
Swiss	0.03+			
Law students: Swiss	0.006+			0.03–
Medical students: Swiss				
Southern Europe	0.05–			
Law students: Southern Europe				
Medical students: Southern Europe				0.05–
Northern Europe	0.04+		0.01+	
Law students: Northern Europe			0.01+	0.02+
Medical students: Northern Europe	0.04+			
Islam		0.02–		
Law students: Islam		0.02–		
Medical students: Islam				
Religiously active (all religions)	0.03–			
Law students: religiously active				
Medical students: religiously active				
Father university education	0.01+			
Law students: father university education	0.03+			
Medical students: father university education				
Father baccalaureate	0.03+			
Law students: father baccalaureate				
Medical students: father baccalaureate				
Mother baccalaureate	0.005+			
Law students: mother baccalaureate	0.03+			
Medical students: mother baccalaureate				

Bold: all medical and law students included; normal (not bold): concerning either law or medical students.
Group M1 : 64 medical students at the end of their 5th year in 1996.
Group M2 : 63 medical students at the beginning of their 5th year in 1996.
Group L1 : 75 first to fourth year law students from an "international law" lecture in 1996.
Group L2 : 93 mostly first year law students from a "law and medicine" lecture in 1996.

Table 3 Number (%) of medical and law students in favour of informing or not informing about the diagnosis or prognosis of cancer if the patient asks to be told the truth

	(1) Diagnosis						(2) Prognosis					
	Medical students			Law students			Medical students			Law students		
Score	**M (n=127)**	M1 (n=64)	M2 (n=63)	**L (n=168)**	L1 (n=75)	L2 (n=93)	**M (n=127)**	M1 (n=64)	M2 (n=63)	**L (n=168)**	L1 (n=75)	L2 (n=93)
1. Certainly tell	**92 (72.4)**	50 (78.1)	42 (66.7)	**129 (76.8)**	58 (77.3)	71 (76.3)	**37 (29.1)**	20 (31.3)	17 (27.0)	**91 (54.2)**	42 (56.0)	49 (52.7)
2. Probably tell	**35 (27.6)**	14 (21.9)	21 (33.3)	**32 (19.0)**	13 (17.3)	19 (20.4)	**57 (44.9)**	23 (35.9)	34 (54.0)	**47 (28.0)**	22 (29.3)	25 (26.9)
3. As likely to tell or not	**0**	0	0	**5 (2.9)**	3 (4.0)	2 (2.2)	**16 (12.5)**	12 (18.8)	4 (6.3)	**9 (5.4)**	3 (4.0)	6 (6.5)
4. Probably do not tell	**0**	0	0	**2 (1.2)**	1 (1.3)	1 (1.1)	**13 (10.2)**	8 (12.5)	5 (7.9)	**17 (10.1)**	8 (10.7)	9 (9.7)
5. Certainly do not tell	**0**	0	0	**0**	0	0	**4 (3.1)**	1 (1.6)	3 (4.8)	**4 (2.4)**	0	4 (4.3)
p Value* (law versus med.)	**0.55**						**0.0003**					
p Value* (same faculty†)		0.15‡			0.91			0.63			0.44	

*Mann-Whitney.
†Between the two groups of students from the same faculty.
‡Students from the younger group M2 less often agreed to tell the patient about the diagnosis.
Group M1 : 64 medical students at the end of their fifth year in 1996.
Group M2 : 63 medical students at the beginning of their fifth year in 1996.
Group L1 : 75 first to fourth year law students from an "international law" lecture in 1996.
Group L2 : 93 mostly first year law students from a "law and medicine" lecture in 1996.
Bold = all medical students; all law students.

AIMS AND HYPOTHESES OF THE PRESENT STUDY

In order to achieve a wider acceptance of patients' right to know and not to know, more should be known about future physicians' and future lawyers' reasons to respect or not to respect patients' wishes concerning information. We chose to compare future physicians to future lawyers as opposed to students from other areas because law students are a clearly defined group which represents also a group of future well educated patients and society's "conscience" in so far as the basic values of modern society are reflected in its laws. They will also intervene as lawyers and judges in legal procedures concerning patients' rights. The goal of this study is to identify the attitudes of future physicians and lawyers towards informing cancer patients about their diagnosis and prognosis and the self-reported reasons for the decision to inform or not to inform. This is done in order to examine two main hypotheses. The first is that many physicians, but fewer non-physicians, make a distinction between telling the truth about diagnosis and telling the whole truth about a poor prognosis. The second is that differences in attitude towards information giving arise from different sets of relevant ethical and legal "reasons", in particular, from different assessments of the harms of informing.

SUBJECTS AND METHODS

In 1996, questionnaires were distributed to convenience samples of 179 medical students and 262 law students. The participants were students attending two different lectures in medical school (M1, M2) and two different lectures in law school (L1, L2). Samples were chosen as a compromise in order to reach a representative number of students near the end of their studies (six years in medicine and three years in law at the University of Geneva). The group M1 consisted of 90 medical students attending a dermatology lecture at the end of their fifth year (116 fifth-year students registered in medical school in Geneva in 1995/96); the group M2 consisted of 89 medical students present at the first sessions of a forensic pathology lecture at the beginning of their fifth year (130 students registered in 1996/7); the group L1 consisted of 137 first to fourth year law students present at a lecture on international law in 1995/6, and the group L2 consisted of 125 mostly first year law students attending a lecture "law and medicine" (257 first year students registered in law school in 1995/96). All medical students had clinical experience in internal medicine and surgery and had practical experience of giving information about diagnosis and prognosis. The questionnaire presented four case scenarios, each involving a 45 year old school-teacher described as competent and non-depressed who is suffering from metastatic lung cancer with a life expectancy of less than one year. Medical students were asked whether, if they were the physician in charge of the patient, they would inform him if he asked them to tell him the truth about his diagnosis (case 1) and prognosis (case 2). They were also asked whether they would inform the same patient if he clearly expressed his wish not to be told his diagnosis (case 3) and prognosis (case 4). Law students were asked, using the same four case scenarios, whether a physician by whom they would like to be treated themselves should inform the patient about his diagnosis and prognosis or not. We used a Likert scale allowing for five different responses: "I certainly inform", "I probably inform", "I am as likely to inform as not to inform", "I probably do not inform", and "I certainly do not inform" ("the physician should certainly/probably inform" etc for law students). Responses were scored from 1 to 5: 1 if the student strongly favoured the patient's wishes being complied with, and 5 if the student strongly favoured not respecting the patient's wish for or against being given information. All students were asked to indicate which of seven ethical or legal considerations (see appendix) had most determined their decision that the patient be informed or not in each of the four scenarios.

STATISTICAL ANALYSIS

Computer statistical analyses were performed by means of the Statistical Package for the Social Sciences (SPSS). The non-parametric Mann-Whitney test for independent samples was used for comparisons between the responses on the Likert scale of dichotomic groups for example, medical students *v*

Table 4 Number (%) of medical and law students in favour of informing or not informing about the diagnosis or prognosis of cancer if the patient asks *not* to be told

	(3) Diagnosis						(4) Prognosis					
	Medical students			Law students			Medical students			Law students		
Score	**M (n=127)**	M1 (n=64)	M2 (n=63)	**L (n=168)**	L1 (n=75)	L2 (n=93)	**M (n=127)**	M1 (n=64)	M2 (n=63)	**L (n=168)**	L1 (n=75)	L2 (n=93)
1. Certainly do not tell	**30 (23.6)**	18 (28.1%)	12 (19.0%)	**22 (13.1)**	8 (10.7%)	14 (15.1%)	**53 (41.7)**	31 (48.4%)	22 (34.9%)	**40 (23.8)**	14 (18.7%)	26 (28.0%)
2. Probably do not tell	**55 (43.3)**	31 (48.4%)	24 (38.1%)	**69 (41.1)**	24 (32.0%)	45 (48.4%)	**49 (38.6)**	25 (39.1%)	24 (38.1%)	**65 (38.7)**	24 (32.0%)	41 (44.1%)
3. As likely to tell or not	**27 (21.3)**	10 (15.6%)	17 (27.0%)	**17 (10.1)**	8 (10.7%)	9 (9.7%)	**16 (12.6)**	6 (9.4%)	10 (15.9%)	**19 (11.3)**	11 (14.7%)	8 (8.6%)
4. Probably tell	**10 (7.9)**	4 (6.3%)	6 (9.5%)	**36 (21.4)**	24 (32.0%)	12 (12.9%)	**5 (3.9)**	1 (1.6%)	4 (6.3%)	**28 (16.7)**	18 (24.0%)	10 (10.8%)
5. Certainly tell	**5 (3.9)**	1 (1.6%)	4 (6.3%)	**23 (13.7)**	11 (14.7%)	12 (12.9%)	**4 (3.1)**	1 (1.6%)	3 (4.8%)	**15 (8.9)**	8 (10.7%)	7 (7.5%)
p Value* (law versus med.)	**0.0004**						**<0.0001**					
p Value* (same faculty†)		0.02			0.01			0.03			0.009	

*Mann-Whitney.
†Between the two groups of students from the same faculty.
Group M1 : 64 medical students at the end of their fifth year in 1996.
Group M2 : 63 medical students at the beginning of their fifth year in 1996.
Group L1 : 75 first to fourth year law students from an "international law" lecture in 1996.
Group L2 : 93 mostly first year law students from a "law and medicine" lecture in 1996.
Bold = all medical students; all law students.

law students. A χ^2 test was employed to compare how frequently law students and medical students indicated a reason as being the most important for the decision to inform or not to inform.

RESULTS

One hundred and twenty seven (71%) of the medical students and 168 (64%) of the law students attending the lectures on the day of distribution returned completed questionnaires. Characteristics of students are described in detail elsewhere.[24] Medical and law students did not differ significantly in respect to sex, religion, and educational level of parents. Significant differences existed concerning age, study year, ethical training, and cultural origin (see table 1).

Associations between the characteristics and the responses to the cases are shown in table 2.

All medical students (100%: 72.4% certainly; and 27.6% probably) and almost all law students (95.8%: 76.8% certainly; and 19.0 % probably) favoured information about the *diagnosis* of cancer if the patient requested it (table 3).

Medical students were significantly less in favour than law students of informing a cancer patient about his *prognosis* ($p = 0.0003$); 82.2% of law students (54.2 % certainly; and 28.0% probably) preferred that the physician inform the cancer patient of his prognosis but only 74% of medical students (29.1% certainly; and 44.9% probably).

A significantly higher percentage of law students (35.1%: 21.4% probably; and 13.7% certainly) than medical students (11.8%: 7.9% probably; and 3.9% certainly) favoured telling about the diagnosis even if the patient had clearly expressed his wish not to be informed ($p = 0.0004$, see table 4).

Significant differences were also found concerning the disclosure of information about *prognosis* to a patient who does

Table 5 Differences between medical and law students (%) concerning the four most often indicated reasons reported to have principally influenced the attitudes toward information about the diagnosis or prognosis of cancer if the patient asks to be told the truth

	(1) Diagnosis		(2) Prognosis	
Type of reason	Medical students M1/M2‡	Law students L1/L2‡	Medical students M1/M2‡	Law students L1/L2‡
Patient autonomy	72.4***	39.9***	62.2*** 71.9/52.4 p=0.02	39.9***
Informing is best	24.4***	44.0***	21.3**	33.9**
Required by the law	2.4*	8.3*	0.8**	6.5**
Always tell the truth	4.7***	24.4***	3.9***	20.2***
Total number	n=127	n=168	n=127	n=168

***(χ^2)p ≤0.001; **(χ^2)p ≤0.01; and *(χ^2)p ≤0.05 for comparison between all law and all medical students.
‡No indication means that no significant difference existed between the two groups of students from the same faculty (p≤0.05).
Group M1 : 64 medical students at the end of their 5th year in 1996.
Group M2 : 63 medical students at the beginning of their 5th year in 1996.
Group L1 : 75 first to fourth year law students from an "international law" lecture in 1996.
Group L2 : 93 mostly first year law students from a "law and medicine" lecture in 1996.

Table 6 Differences between medical and law students (%) concerning the four most often indicated reasons reported to have principally influenced the attitudes toward information about the diagnosis or prognosis of cancer if the patient asks *not* to be told the truth

	(3) Diagnosis		(4) Prognosis	
Type of reason	Medical students M1/M2‡	Law students L1/L2‡	Medical students M1/M2‡	Law students L1/L2‡
Patient autonomy	80.3*** 87.5/73.0 p=0.04	55.4***	81.9*** 89.1/74.6 p=0.03	58.9*** 46.7/68.8 p=0.003
Informing is best	15.7**	27.4**	12.6† 4.7/20.6 p=0.006	20.8†
Required by the law	0.8***	7.7***	0.8*	5.4*
Always tell the truth	3.1	4.8	1.6***	12.5***
Total number	n=127	n=168	n=127	n=168

***p (χ^2) ≤0.001, **p (χ^2) ≤0.01, *p (χ^2) ≤0.05, and †p (chi2) = 0.06 for comparison between all law and all medical students.
‡No indication means that no significant difference existed between the two groups of students from the same faculty (p≥0.05).
Group M1 : 64 medical students at the end of their 5th year in 1996.
Group M2 : 63 medical students at the beginning of their 5th year in 1996.
Group L1 : 75 fifth to fourth year law students from an "international law" lecture in 1996.
Group L2 : 93 mostly first year law students from a "law and medicine" lecture in 1996.

not want to know: 26% of law students (16.7% probably; and 8.9% certainly), but only 7% of medical students (3.9% probably and 3.1% certainly) favoured giving the information about prognosis against the clearly expressed wish of the patient.

Even if law and medical students did not show significantly different attitudes towards informing a cancer patient about his diagnosis at his request, the reasons reported by the students as having had the greatest influence on their decision to inform differed significantly between the two groups of students (table 5).

Law students indicated significantly more often than medical students reasons in connection with the patient's good, legal obligations and the physician's obligation to tell the truth. In contrast, law students reported significantly less often than medical students that their attitude had been determined predominantly by respect for the autonomous choice of the patient. The same differences were also found in the other three case scenarios (tables 5 and 6).

The reasons indicated by students in favour of informing a patient who wanted to know differed significantly from the reasons indicated by students in favour of *not* informing a patient who wanted to know and also from the reasons indicated by students favouring not giving information to a patient who did not want to know (tables 7 and 8). Respect for the autonomous choice of the patient was the reason most cited (by more than 70 %) by medical students for respecting the patient's wish for or against information. Respect for patient autonomy was given by the medical students even more often (by more than 89 %) as the reason to respect the patient's right not to know.

A considerable percentage (about 40% of law students and 24% of medical students) of students who respected the patient's wish for information indicated that the best thing for

Table 7 The four most often indicated reasons* by medical and law students (%) reported to have principally influenced the attitudes toward information about the diagnosis or prognosis of cancer if the patient asks to be told the truth

	(1) Diagnosis					(2) Prognosis			
	Reasons†:					Reasons†:			
Response:‡	Most often	2nd most	3rd most	4th most	Response:‡	Most often	2nd most	3rd most	4th most
Law students									
1 (n=128)	BI (46.9)	A (39.8)	T (24.2)	RL (9.4)	1 (n=90)	A (46.7)	BI (45.6)	T (23.3)	RL (10.0)
2 (n=32)	A (43.8)	BI (40.6)	T (25.0)	DH (9.4)	2 (n=47)	A (38.3)	BI (29.8)	T (25.5)	BN (6.4)
3 (n=5)	A (40.0)	T (40.0)	BI (20.0)	BN (20.0)	3 (n=9)	A (33.3)	BI (11.1)	T (11.1)	BN (11.1)
4 (n=2)	BN (100.0)				4 (n=17)	BN (47.1)	DH (35.3)	A (17.6)	BI (5.9)
5 (n=0)					5 (n=4)	BN (75.0)	A (25.0)		
Medical students									
1 (n=92)	A (77.2)	BI (20.7)	T (5.4)	RL (3.3)	1 (n=37)	A (70.3)	BI (16.0)	T (10.0)	DH (8.1)
2 (n=35)	A (60.0)	BI (34.3)	DH (8.6)	T (2.9)	2 (n=57)	A (71.9)	BI (29.8)	DH (5.3)	T (1.8)
3 (n=0)					3 (n=16)	A (56.3)	BN (25.0)	BI (18.1)	DH (12.5)
4 (n=0)					4 (n=13)	BN (23.1)	A (23.19)	BI (7.7)	Others§
5 (n=0)					5 (n=4)	BN (25.0)	Others§		

*A = respect for autonomy, BI = informing is best, BN = not informing is best, T = always tell the truth, RL = required by the law, DH = don't harm.
†If >100% in the same line this is due to about 5–10% of students having indicated more than one reason as most important.
‡1 certainly respect the patient's wish (that is, inform), 2 probably respect the patient's wish (that is, inform), 3 as likely to respect as not to respect the patient's wish, 4 probably do not respect the patient's wish (that is, do not inform), 5 certainly do not respect the patient's wish (that is, do not inform).
§Others: the exact prognosis of the individual cannot be known from statistical average life expectancy.
Group M1 : 64 medical students at the end of their 5th year in 1996.
Group M2 : 63 medical students at the beginning of their 5th year in 1996.
Group L1 : 75 first to fourth year law students from an "international law" lecture in 1996.
Group L2 : 93 mostly first year law students from a "law and medicine" lecture in 1996.

Table 8 The four most often indicated reasons* by medical and law students (%) reported to have principally influenced the attitudes toward information about the diagnosis or prognosis of cancer if the patient asks *not* to be told the truth

	(3) Diagnosis					(4) Prognosis			
	Reasons†:					Reasons†:			
Response:‡	Most often	2nd most	3rd most	4th most	Response:‡	Most often	2nd most	3rd most	4th most
Law students									
1 (n=22)	A (86.4)	RL (9.1)	DH (4.5)	BI (4.5)	1 (n=40)	A (72.5)	BN (10.0)	DH (10.0)	RL (5.0)
2 (n=69)	A (81.2)	BN (15.9)	DH (7.2)	BI (5.8)	2 (n=65)	A (83.1)	BN (12.3)	DH (10.8)	BI (7.7)
3 (n=17)	A (58.8)	BI (29.4)	DH (11.8)	BN (5.9)	3 (n=19)	A (36.8)	BI (31.6)	DH (10.5)	BN (5.3)
4 (n=36)	BI (61.1)	T (30.6)	A (19.4)	DH (11.1)	4 (n=28)	BI (57.1)	T (28.6)	A (21.4)	RL (10.7)
5 (n=23)	BI (60.9)	T (26.1)	RL (8.7)	DH (8.7)	5 (n=15)	BI (46.7)	T (46.7)	A (20.0)	DH (13.3)
Medical sudents									
1 (n=30)	A (93.3)	DH (6.7)	RL (6.7)		1 (n=53)	A (86.8)	DH (9.4)	BN (3.8)	BI (1.9)
2 (n=55)	A (96.4)	DH (9.1)	BI (5.5)	RL (1.8)	2 (n=49)	A (91.8)	BN (8.2)	DH (2.0)	BI (2.0)
3 (n=27)	A (63.0)	BI (33.0)	RL (3.7)	T (3.7)	3 (n=16)	A (62.5)	BI (50.0)		
4 (n=10)	BI (50.0)	A (30.0)	T (20.0)		4 (n=5)	BI (100.0)			
5 (n=5)	BI (60.0)	A (20.0)			5 (n=4)	A (75.0)	BI (25.0)		

*A = respect for autonomy, BI = informing is best, BN = not informing is best, T = always tell the truth, RL = required by the law, DH = don't harm.
†If >100% in the same line this is due to about 5–10% of students having indicated more than one reason as most important.
‡1 certainly respect the patient's wish (that is, do not inform), 2 probably respect the patient's wish (that is, do not inform), 3 as likely to respect as not to respect the patient's wish, 4 probably do not respect the patient's wish (that is, inform), 5 certainly do not respect the patient's wish (that is, inform).
Group M1 : 64 medical students at the end of their 5th year in 1996.
Group M2 : 63 medical students at the beginning of their 5th year in 1996.
Group L1 : 75 fifth to fourth year law students from an "international law" lecture in 1996.
Group L2 : 93 mostly first year law students from a "law and medicine" lecture in 1996.

the patient who wanted to know would be to inform him. A significantly smaller percentage (less than 6% of medical students and less than 12 % of law students) of students who respected the patient's wish not to have information indicated that the best thing for the patient who did not want to know would be not to be informed.

DISCUSSION

The most important findings of the study

In this study, we examined whether future physicians and future lawyers in Geneva would respect the right of a cancer patient to know or not to know his diagnosis and prognosis and the self-reported reasons for these decisions. Four hypothetical cases presented a 45-year-old competent, well educated patient suffering from metastatic lung cancer with a life expectancy of less than one year who asks to know his diagnosis (case 1) and prognosis (case 2) or, alternatively, asks not to be told his diagnosis (case 3) or his prognosis (case 4).

Our results indicate that all future physicians and 95.8% of future lawyers of our samples would respect the right of a cancer patient to know his diagnosis. However, the right of a cancer patient to be informed about poor prognosis is respected by significantly fewer future physicians (74%) and future lawyers (82.2%). Still fewer future physicians (66.9%) and future lawyers (54.2%) would respect the right of a cancer patient *not* to know his diagnosis. The right *not* to know about prognosis was respected by 80.3% of future physicians, but only 62.5% of future lawyers.

We found a limited number of associations between the responses to some of the cases and self-reported cultural origin, religion, ethical teaching, and school education of parents but not sex of students. These associations could not explain the significant differences between law and medical students (see table 2).

Confirmation of the two hypotheses

The identification of self-reported reasons helped us to understand better why students' attitudes vary according to the type of case and according to the type of studies (law versus medicine).

First of all, in all four case scenarios medical students reported significantly more often than law students that their decision about informing the patient had been influenced by the view that physicians should respect the autonomous choices of patients. Law students reported more often than medical students deontological reasons, referring to the patient's good, the avoidance of harm, and veracity, as well as "legal obligation". Even if respect for the patient's autonomy was indicated as principal reason significantly more often by students who respected the patient's wish than by students who did not, a sizeable percentage of students did not respect the patient's wish in spite of placing a high value on patient autonomy. Similarly, Fried *et al*[25] found that the great majority of those among 256 physicians in Rhode Island who would respect the wish of a hypothetical patient to stop treatment or to receive a great amount of pain medication affirmed that respect for patient autonomy is important. However, about thirty per cent of those who would not respect the patient's wish still acknowledged the importance of respect for patient autonomy. These findings show that future physicians in Geneva, similarly to American physicians, and significantly more than future lawyers in Geneva, recognise respect for patient autonomy as an important value. The fact that more medical students than law students justified their attitudes by referring to the importance of patient autonomy does not, however, imply medical students' greater compliance with the patient's wish in case scenario 2. Even if significantly more medical students (62.2%) than law students (39.9%) indicated respect for patient autonomy as most important for their attitude, medical students were significantly less likely to respect the cancer patient's right to be told his prognosis. These results confirm our first hypothesis that more (future) physicians than (future) lawyers distinguish between telling the truth about diagnosis and telling the full truth including a poor prognosis.

Our results concerning the self-reported reasons of students confirm also our second hypothesis, which states that differences in attitude towards information-giving are related to conflicting evaluations of whether the information would benefit or harm the patient. Differences of attitudes according to the type of case and the type of faculty (law versus medicine) were related to these different evaluations. Only a

few future physicians seemed to have been convinced that it would be best for a patient *not* to be informed of his diagnosis and prognosis if he asked not to be told. On the contrary, a substantial minority of medical students said that they would inform a patient at his request because such a course would be the best for the patient. Similarly, Holland *et al*[26] found that most physicians believed that information about the diagnosis of cancer was in the best interest of the patient, because knowing a diagnosis of cancer had been shown to be well tolerated by most patients[27] and was believed to have positive effects on patients' coping, compliance, tolerance of treatment, planning for the future, communication with others, and improved prognosis.[26] Many physicians, however, judge that telling a cancer patient the truth about poor prognosis is not as much in the best interest of the patient as telling the truth about diagnosis.[1 10 23 28] A significant minority of future physicians at Geneva seem to be more influenced by their own evaluation of the patient's good than by their respect for the patient's right to know or not to know. The evaluation that information about diagnosis is beneficial seems to be the reason why only 66.9% of future physicians said they would respect the right of the cancer patient *not* to know his diagnosis. The evaluation that information about a cancer prognosis is less, or not at all, beneficial, seems to be the reason why fewer future physicians (74%) said they would agree to inform a patient of his prognosis at his request than of his diagnosis, and why more future physicians (80.3%) agreed *not to inform* a patient of his prognosis if he asked not to be told than *not to inform* of his diagnosis (66.9%). In contrast, the greater willingness among future lawyers in Geneva to respect the patient's right to know his prognosis (82.2%) than among future physicians (74.0%) can be explained by the significantly greater percentage among the former having indicated that being informed would be best for the patient.

Veracity

As opposed to future lawyers, very few (< 5%) future physicians reported having been influenced by an ethical obligation to tell the truth or by legal concerns (Geneva has a cantonal law indicating the right of the patient to full information, except in emergency situations). Our findings are in accordance with other studies which show that many physicians justify their decisions in terms of consequences and place a higher value on patients' welfare than on truth-telling for its own sake or concern for legal provisions and obligations to society.[29] Physicians who chose not to comply with a patient's wishes for assisted suicide or euthanasia perceived that the intervention requested was not ethically acceptable, or identified a conflict with their moral beliefs as the reason not to comply with patient wishes, rather than referring to the concern that the intervention did not have a valid legal basis.[25]

Implications of our study for the teaching of ethics

Our results concerning the self-reported reasons of future physicians and future lawyers are helpful when considering means to achieve a better acceptance of patients' right to know and not to know. The reluctance of physicians to inform about poor prognosis could be diminished if physicians were better informed, first, about the fact that not only law students in Geneva and most healthy adults,[1] but also a great majority of cancer patients[2 30] wish to be informed about prognosis even if it is poor, and second about empirical evidence that disclosing the truth to a patient who wants to know seems to be beneficial.[31 32] Some medical students reported not being in favour of telling the patient about his poor prognosis because of the impossibility of predicting the individual patient's exact prognosis from average statistical life-expectancy data. It is possible that the more positive attitude to informing about prognosis among law students is related to a simplistic view of the prognostic "truth" for particular patients. Knowing about medical students' difficulties in considering statistical information to be the "truth" for an individual patient is important because it underlines the necessity of addressing these questions more explicitly during medical and ethical education. A practical application of our study to medical education could be to use our findings in the development of case-based teaching modules on information about prognosis and respect for patients' wishes.

Methodological weaknesses

Our study has some methodological weaknesses because large numbers of tests done comparing pairs of groups can generate "significant" results by chance alone. However, the consistency of the various results within our study as well as with other studies in this area speaks against the influence of chance alone. Another methodological weakness of our study is that for reasons of accessibility of students and differences in the length of the curriculum in medical and in law school, medical students from our study were on average two years older than law students. We cannot exclude the possibility that this age effect influenced our results. However, we found nothing to suggest that differences in age would explain the different attitudes: attitudes of older law students, that is, students whose age was at least 24 years and thus comparable to the age of medical students, did not differ from attitudes of younger law students. A further methodological problem is that the questions we asked the future doctors and lawyers were not exactly the same. Doctors indicated what they would do, but law students what the "good" physician should do. This could account for some of the differences in the responses. Other studies show that physicians would not always do what they think they should do[33] and would not always treat patients how they would wish to be treated themselves: according to Oken,[8] 60% of physicians desired to be informed if they had cancer, though 88% usually did not inform a cancer patient.

The generalisation of the findings of our study is limited in two respects. First, we only tested scenarios concerning a professional, middle-aged, male patient with lung cancer. Findings might have been different if the patient had been a young women suffering from leukaemia. Second, we used convenience samples and studied the attitudes of fifth year medical students rather than physicians, and of law students rather than real patients. Second, there could be considerable sampling bias because those who attended their lecture and completed the questionnaire were probably more motivated in general, and more interested in ethical and legal issues than those who did not attend and than those who attended but did not complete the questionnaire. Some generalisation is justified, however, because we reached a high percentage (two thirds) of all fifth year medical students from two consecutive years and at least one sample of more advanced law students not influenced by specific teaching about law and medicine (group L1). Moreover, the attitudes of the two groups of students of the same type are similar, whereas the attitudes of medical and law students differ in a consistent way. We cannot rule out the possibility that our results reflect the attitudes of "more interested" students, but this would be the case for law students as well as for medical students. Overall, the attitudes of future physicians at Geneva towards telling a cancer patient about *diagnosis* are comparable to attitudes of physicians in the United States and Northern Europe.[1 10] Concerning the information about cancer *prognosis*, the fifth year medical students at Geneva were more likely than physicians from the areas mentioned before[1 10] to tell the truth if the patient asked to know it. Further studies among physicians of different generations at Geneva would be needed in order to know whether the greater willingness to inform is characteristic of a sample of students and disappears with growing clinical

experience or whether local education in medical ethics has a persistent effect on physicians recently trained at the University of Geneva.

A competent patient's right to know and right not to know are cornerstones of today's medical ethics. Other more detailed studies are needed if we are to know more about why these rights are still incompletely respected in many countries.

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APPENDIX

Indicate which of the following reasons has had the greatest influence on your decision about information or non-information of the cancer patient:

1. Objectively, the best for the patient would be to be informed.
2. Objectively, the best for the patient would be not to be informed.
3. The autonomous choice of the patient to be informed or not to be informed should be respected.
4. The physician should avoid causing harm to the patient.
5. A physician should always tell the truth.
6. There is a legal obligation for the physician to act in this way.
7. Other reason (please fill in):

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