Supplements

1) Items of palliative knowledge of physicians with rotation in palliative care (PR) and board certified specialists (BCS) without experience in palliative care

Item of palliative knowledge	Number of physicians with correct answer			I don't know			Number of physicians with wrong answers		
	total	PR	BCS	total	PR	BCS	total	PR	BCS
Palliative care is synonymous with caring for the dying.	94% n=31	94% n=16	94% n=15	-	-	-	6% n=2	6% n=1	6% n=1
Palliative patients may refuse any medically indicated measure	94% n=31	94% n=16	94% n=15	3% n=1	-	6% n=1	3% n=1	6% n=1	-
In the case of intense tumour pain, an opioid of stage 3 of WHO stage therapy is used from the beginning to treat the pain.	55% n=18	76% n=13	60% n=9	6% n=2	-	13% n=2	39% n=13	24% n=4	31% n=5
In the initial prescription of opioids, all non-opioid analgesics should be discontinued.	97% n=32	100% n=17	94% n=15	3% n=1	-	6% n=1	-	-	-
Hydromorphone can be safely used in the case of patients with renal failure	67% n=22	88% n=15	44% n=7	24% n=8	-	50% n=8	9% n=3	12% n=2	6% n=1
Opioids are used against pain peaks in a dose of 5% of the daily dose	76% n=25	88% n=15	56% n=9	15% n=5	-	31% n=4	9 % n=3	12% n=2	13% n=2
Since no tolerance develops in opioid-induced nausea, all patients should be prescribed an antiemetic.	82% n=27	88% n=15	75% n=12	6% n=2	-	13% n=2	12% n=4	12% n=2	13% n=2
If the analgesic effect is insufficient, the previous daily dose of the opioid should be increased by 10%.	67% n= 22	76% n=13	56% n=9	12% n=4	-	25% n=4	21% n=7	24% n=4	19% n=3
If side effects make a further increase of an opioid appear difficult, an opioid rotation should be considered.	94% n= 31	100% n=17	88% n=14	6% n=2	-	13% n=2	-	-	
About 10% of all patients whose pain is well controlled with basic therapy have breakthrough pain.	33% n=11	41% n=7	25% n=4	39% n=13	24% n=4	56% n=9	28% n=9	35% n=6	20% n=3
Invasive dental treatment should be avoided during bisphosphonate therapy.	64% n=21	59% n=10	69% n=11	12% n=4	6% n=1	19% n=3	24% n=8	35% n=6	13% n=2
More than 80% of patients taking opioids experience nausea or vomiting.	48% n=16	71% n=12	25% n= 4	15% n=5	6% n=1	25% n=4	33% n=11	18% n=3	50% n=8
Because most people who take opioids suffer under obstipation, it is necessary to use laxatives in the concomitant medication.	100% n=33	-	-	-	-	-	-	-	-
Less than 0.2% of tumour patients who receive opioids for pain therapy under controlled conditions, develop an addiction.	60% n=20	77% n=13	21% n=7	24% n=8	18% n=3	31% n=5	15% n=5	6% n=1	25% n=4
If someone has respiratory distress, the arterial oxygen partial pressure is below 60 mmHg	76% n=25	82% n=14	69% n=11	15% n=5	12% n=2	19% n=3	6% n=2	-	13% n=2
Morphine relieves breathlessness.	94% n=31	100% n=17	88% n=14	6% n=2	-	13% n=2	-	-	-
Patients with respiratory distress often experience relief when the room temperature will be increased.	76% n=25	94% n=16	56% n=9	21% n=7	6% n=1	38% n=6	3% n=1	-	6% n=1
Dopamine, histamine, acetylcholine and serotonin are neurotransmitters in the vomiting center.	91% n=30	94% n=16	88% n=14	3% n=1	-	6% n=1	6% n=2	6% n=1	6% n=1
If the main cause of nausea is hypercalcemia, the administration of a bisphosphonate is effective in relieving nausea.	60% n=20	65% n=11	56% n=9	27% n=9	12% n=2	44% n=7	12% n=4	24% n=4	-
If no more fluid is administered in the dying process, one speaks of active euthanasia.	97% n=32	100% n=17	94% n=15	3% n=1	-	6% n=1	-	-	-
Expressing the wish to die does not exclude the will to live.	91% n=30	94% n=16	88% n=14	6% n=2	6% n=1	6% n=1	3% n=1	-	6% n=1
An anxiolytic is one of the most helpful drugs for high psychological distress.	91% n=30	88% n=15	94% n=15	3% n=1	6% n=1	6% n=1	6% n=2	6% n=1	-
Benzodiazepines are the medication of choice for symptoms of a delirium.	67% n=22	77% n=13	56% n=9	3% n=1	-	6% n=1	30% n=10	24% n=4	38% n=6
It is helpful to darken the room for a delirious patient so that he can sleep well.	42% n=14	47% n=8	38% n=6	18% n=6	6% n=1	31% n=5	39% n=13	47% n=8	31% n=5
In the case of patients with brain metastases, it is advisable to discuss the possibility of an epileptic seizure with their relatives and to prescribe an anticonvulsant medication.	94% n=31	94% n=16	94% n=15	-	-	-	6% n=2	6% n=1	6% n=1
When physicians give bad news, they should check the patients' understanding of the disease and their concerns.	100% n=33	100% n=33	100% n=33	-	-	-	-	-	-
n a medical consultation about a malignant disease, it is advisable to use the word "cancer" repeatedly.	45% n=15	41% n=7	50% n=8	6% n=2	12% n=2	-	48% n=16	47% n=8	50% n=8

Hospice work is synonymous with caring for the dying	70% n=23	76% n=13	63% n=10	-	-	-	30% n=10	24% n=4	38% n=6
Body language is an important aspect of communication when talking to patients.	100% n=33	100% n=17	100% n=16	-	-		-	-	-
After the death of the patient, the support of a hospice service is completed.	91% n=30	94% n=16	88% n=14	6% n=2	-	13% n=2	3% n=1	6% n=1	-
The possibility of accompanying a patient by a hospice service makes the patient afraid and can lead to a loss of hope.	73% n=24	77% n=13	63% n=10	9% n=3	12% n=2	6% n=1	18% n=6	12% n=2	25% n=4
The control of physical symptoms is done by medical measures and is not a task of hospice work.	73% n=24	59% n=10	88% n=14	3% n=1	-	6% n=1	24% n=8	41% n=7	6% n=1
When a patient claims to want to die, he is at risk of suicide.	94% n=31	94% n=16	94% n=15	6% n=2	-	6% n=1	-	6% n=1	-

2) Items of palliative self-efficacy Expectation of physicians with rotation in palliative care (PR) and board certified specialists (BCS) without experience in palliative care

I think I'm able…	PR, n=17 strongly agree	agree	disagree	Strongly disagree	BCS n=16 strongly agree	agree	disagree	Strongly disagree
to collect data that describe the pain of a patient ina differentiated way.	11	6	-	-	9	6	1	-
to treat nausea according to its cause.	10	7	-	-	5	9	2	-
to present the regional offers of specialised palliative care.	8	8	1	-	1	5	7	3
to convince a colleague of the need for palliative support.	10	7	-	-	5	8	3	-
to recognize psychosocial problems and to discuss them with patients and relatives	9	7	1	-	6	10	-	-
to organize mediation to hospice and palliative services	11	6	-	-	3	8	5	-
to recognize fear, to treat it and to alleviate it through a calm atmosphere of conversation.	11	6	-	-	8	7	1	-
to recognize the complex needs of a dying person and to react appropriately to them.	8	8	1	-	4	11	1	-
to offer a suitable treatment concept for pain according to its pathogenesis and quality.	11	6	-	-	6	8	2	-
to stay in conversation when the wish for euthanasia is expressed.	12	4	1	-	5	8	3	-
to recommend and instruct oral hygiene measures.	7	7	3	-	5	3	8	-
to discuss possible side effects of the prescribed drugs.	10	7	-	-	8	7	1	-
to recognize and alleviate symptoms of a delirium.	6	10	1	-	5	11	-	-
to integrate cultural and spiritual aspects of dying into the treatment of critically ill people	5	11	1	-	3	9	4	-
to encounter "difficult" patients and relatives with empathy.	9	8	-	-	8	7	1	
to recognize whether a person suffers, even if the possibilities of communication are limited	8	8	1	-	9	7	-	-
to advise a patient/patient on the basic conditions of the patient's directive and to draft one with him/her	7	7	3	-	4	6	3	3
to contribute constructively to the supervision and to participate in the further development of my team	6	9	2	-	6	8	2	-
I was able to gain experience through my rotation, which I can use on further missions.	15	2	-	-	-	-	-	-

3) self-assessment of competence in hospice and palliative care of physicians with rotation in palliative care (PR) and board certified specialists (BCS) without experience in palliative care

Self-assessment item	PR (n=17) Mean value	BCS (n=16) Mean value	p
All in all, I feel safe in the exercise of my medical work.	1,76	1,63	0,583
I have reflected incisive events in my life (grief, illness, death, dying...).	1,65	1,88	0,666
I am ready to get involved with strong emotions of the dying and relatives.	1,59	1,75	0,632
I'm able to empathize with the dying and their families.	1,71	1,56	0,598
I am familiar with the ethical tension between the voluntary renunciation of nutrition and fluids.	1,65	1,81	0,555
I feel confident in dealing with ethical conflicts between the ethical principles of autonomy and care.	1,94	2,56	0,088
I know the limits of my role as a physician.	1,41	1,44	0,950
I can maintain the limitations of my role as a physician.	1,76	1,69	0,574
I am aware that I also bring my own fears and wishes into my medical work.	1,24	1,56	0,118
I feel like part of a multi-professional team.	1,24	1,56	0,502
I am able to handle myself with mindfulness.	2,35	2,19	0,690
I can sense what's good for me and what's harming me.	2,24	1,75	0,147
I am aware of my own talents.	1,94	1,75	0,451
It is difficult for me to talk about ambulatory or stationary hospice services with patients and relatives.*	1,35	1,9	0,012
I am familiar with the contents and working methods of hospice work (tasks main office and voluntary work, locations)	2,18	2,94	0,042
I am familiar with the main contents of the German Hospice and Palliative Act (2015).	2,76	3,56	0,058
I know how the hospice work is initiated to accompany a patient and his relatives.	2,00	2,94	0,004
I know the structures of hospice and palliative networks	1,88	2,94	0,007
I am aware of the legal basis for assisting suicide.	2,00	2,44	0,282

*inverse analysis of the question.