The effect of specialized palliative care in cancer. A systematic review

6th International Seminar of the PRC and EAPC RN

December 1-3, 2016

K. Holmenlund, P. Sjøgren and M. Nordly

Department of Oncology, Rigshospitalet, Copenhagen University Hospital, Denmark
Department of Clinical Medicine, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark

Background

Former reviews of the effectiveness of SPC have mainly been based on mixed populations, without separating the results for patients with cancer (1-6).

Three systematic reviews focused on patients with cancer (7-9), though two of them only included studies examining home-based SPC (7, 8), and two of them were published in the late 1990s, where the amount of RTCs of SPC was sparse (8, 9).

1. Davis MP, et al. Annals of Palliative Medicine. 2015;4(3):99-121.
2. Gomes B, et al. The Cochrane Database of Systematic Reviews. 2013(6):1-279.
3. Zimmermann C, et al. JAMA. 2008;299(14):1698-709.
4. Salisbury C, et al. Palliative Medicine. 1999;13:3-17.
5. Higginson IJ, et al. Journal of Pain and Symptom Management. 2002;23(2):96-106
6. Kavalieratos, et al. JAMA. 2016;316(20):2104-2114.
6. Nordly M, et al. Palliative and Supportive Care. 2016:1-12.
7. Smeenk FW, et al. BMJ. 1998;316:1939-44.
8. Hearn J, et al. Palliative Medicine. 1998;12:317-22.

The primary aim of the present systematic review is to evaluate the efficacy of RCTs of different types of SPC regarding QoL, physical and psychological symptoms as well as survival in adult patients with advanced cancer

Methods

PICO	Terms	Fields
Patient	cancer OR neoplasm OR malignan* OR carcinoma* OR tumor OR tumour OR oncol* AND incurable OR advanced OR terminal OR metastasised OR metastasized	All fields
Intervention	specialised palliative care OR specialized palliative care OR spc OR palliation OR palliative	Title/Abstract
Outcome	pain OR symptoms OR survival OR depression OR anxiety OR mood OR quality of life	All fields
AND	randomised controlled trial OR randomized controlled trial OR randomization OR randomization OR rct	Title/Abstract
NOT	non-malignan* OR nonmalignan* OR non-cancer OR noncancer OR child* OR pediatric* OR paediatric*	Title/Abstract

The searches were performed in the databases PubMed, Embase and Cochrane Central Register of Controlled Trials

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Methods

Inclusion criteria

- Patients diagnosed with advanced, metastatic, incurable and/or life-limiting (poor clinical prognosis) cancer disease
- > 18 years
- RCTs which have been conducted to investigate the effects of specialized palliative care
- Data on relevant patient outcomes (QoL/physical symptoms/mood/survival)
- Written in English

Exclusion criteria

- Double publications
- Studies with non-malignant diseases or mixed populations not providing separate results for cancer patients
- Protocols

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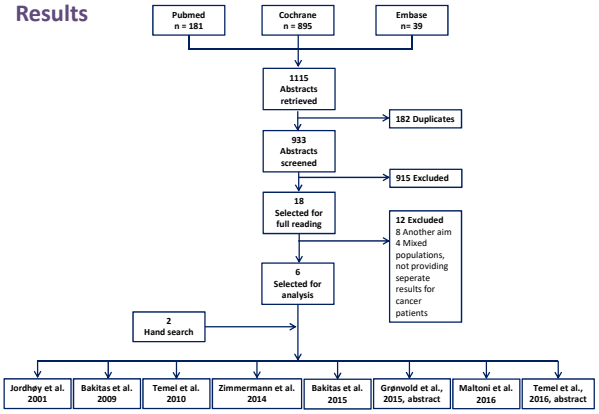
Results



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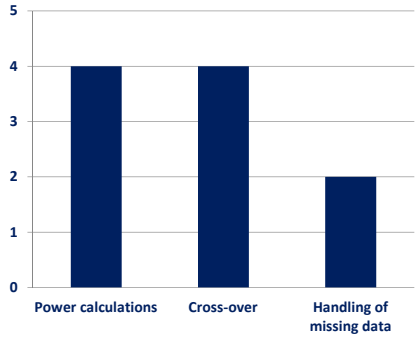
Results

Author, journal, year	Country	Design	Sample size Intervention/ Control	Duration	Intervention	Control
Temel, 2016 ASCO Annual Meeting, 2016	USA	RCT	350 175/175	24 weeks	PC integrated with oncology care (at least monthly visits with PC)	Standard care
Maltoni et al., EJC, 2016	Italy	RTC	207 107/100	Until death	Patients were seen by a member of the PC team every 2.-4. week until death. If necessary the patients could contact the team between the meetings.	Standard care + On-demand early SPC
Grønvold et al., abstract EAPC, 2015	Denmark	RCT	297 145/152	8 weeks		Standard care + SPC on request
Bakitas et al., JCO, 2015	USA (New Hampshire)	RCT	207 104/103	Until death	Weekly telephone-based coaching sessions in 6 weeks by advanced practice nurse . Thereafter monthly follow-up calls until death.	Standard care + Nurse-led PC (3 months later)
Zimmermann et al., The Lancet, 2014	Canada	Cluster RCT	461 228/233	16 weeks	1 week after initial consultation provided by a PC nurse. Thereafter telephone-based consultations were given when requested. Once a month there was outpatient follow-up in the PC clinic.	Standard care + SPC on request
Temel et al., NEJM, 2010	USA (Boston)	RCT	151 77/74	12 weeks	Outpatient follow-up at least monthly, more often if necessary, at the discretion of the patient, the oncologist or palliative care provider.	Standard care + SPC on request
Bakitas et al., JAMA, 2009	USA (New Hampshire)	RCT	322 161/161	Until death	Weekly the first four weeks. Here after monthly follow-up calls until death or study termination. Patients and caregivers were offered to participate in monthly group meetings where PC physicians and nurses were present.	Standard care + SPC on request
Jordhøy et al., JCO 2001	Norway	Cluster RCT	434 235/199	6 months	Meetings with GP, community nurse and a PC physician or nurse were arranged when needed. The SPT was available for communal actors if necessary regarding to home care treatments	Standard care + SPC on request

Author	Time in disease trajectory	Questionnaires follow-up	Effect	
			Primary aim	Secondary aim
Temel, 2016 ASCO Annual Meeting, 2016	≤8 weeks after diagnosis of metastatic lung cancer or non-colorectal GI cancer not being treated with curative intent. No prior therapy for metastatic disease	12 and 24 weeks after enrollment	• QoL at 12 weeks: -	• **QoL at 24 weeks: ↑** • HADS at 12 and 24 weeks: - • **Depression at 12 and 24 weeks: ↓** • EOL discussions: ↑
Maltoni et al., EJC, 2016	≤8 weeks after diagnosis of inoperable locally advanced and/or metastatic cancer. Before anticancer treatment.	12 weeks after enrollment	• **QoL: ↑**	• **Physical symptoms: ↓** • Depression: - • Anxiety: - • Overall survival: - • Resource use: - • Place of death: -
Grønvold et al., abstract EAPC, 2015	Stage IV cancer (TNM classification) (If CNS cancer grade III/IV) and one palliative need with a severity on at least 50% of maximal score + four additional symptoms	3 and 8 weeks after enrollment	• QoL: -	• Physical symptoms: - • Depression: - • Anxiety: - • Survival: - • Satisfaction with care: - • Economical consequences: -
Bakitas et al., JCO, 2015	Diagnosed with/progression of/ recurrence of advanced cancer within 30-60 days and prognosis of 6-24 months	Every 6th week the first 24 weeks, thereafter every 12th week until death	• QoL: - • Physical symptoms: - • Mood: - • **1-year survival: ↑ 15%** • Resource use: -	• Overall survival: - • Place of death: -
Zimmermann et al., The Lancet, 2014	Advanced cancer and prognosis of 6-24 months, ECOG 0-2	Every 4th week in 16 weeks	• QoL after 3 months: -	After 3 months • Physical symptoms: - • QoL-E: ↑ • Satisfaction with care: ↑ • Interaction between staff and patient: - After 4 months • **QoL: ↑** • **Physical symptoms: ↓** • QoL-E: ↑ • Satisfaction with care: ↑ • Interaction between staff and patient: -
Temel et al., NEJM, 2010	≤8 weeks after diagnosis of metastatic NSCLC	12 weeks after enrollment	• **QoL: ↑**	• **Depression: ↓** • **Survival: ↑** • Aggressiveness of end-of-life-care: ↓ • Better documentation of resuscitation preferences in electronic medical record
Bakitas et al., JAMA, 2009	Diagnosed with advanced cancer within 8-12 weeks and prognosis of app. 12 months	4 weeks after enrollment, thereafter every 12th week until death	• **QoL: ↑** • Physical symptoms: - • Resource use: -	• **Depression: ↓** • Overall survival: -
Jordhøy et al., JCO 2001	Incurable cancer and prognosis of 2-9 months	Every 4th week in 6 months	• QoL: - • Physical symptoms: - • Mood: - • Place of death: death at home ↑ 30%	

Limitations



Discussion

Design
- Cluster
- Diagnosis
- Primary outcomes
- Assessments

Interventions
- Nurse / physician / multidisciplinary
- Education
- Number of consultations
- Ambulatory / telephone based

Control arm
- What are usual/standard care?
- Capacity of SPCT

Conclusion

- The evidence of the studies ranged from low to high
- The effect of SPC is varying between the studies:
  - 5/8 studies QoL increased (2 as secondary outcome)
  - 2/8 studies survival increased (1 as secondary outcome)
  - 3/8 studies depression decreased (secondary outcome)
  - 2/8 studied showed reduced symptom burden (secondary outcome)
- The 6 studies presented limitations regarding sample power, cross-over effect, and handling of missing data
- Moreover, there is a lack of similar studies with comparable interventions, which does not allow for generalizability and represents high probability of bias
- Observing these issues, the strength of recommendation is low/moderate for specialized palliative care to increase QoL in patients with advanced cancer

Thank you for your attention!

mie.nordly@regionh.dk