

Zoekverantwoording

Onderzoeksvraag 1

Om de uitgangsvraag van deze module te kunnen beantwoorden, is een systematisch literatuuronderzoek uitgevoerd. De onderzoeksvraag die hiervoor is opgesteld is PICO-gestructureerd en luidt: Wat is het effect van antibiotica, verbandmaterialen en wondreiniging op geuroverlast bij patiënten met een oncologische ulcus in de palliatieve fase?

Onderzoeksvraag

P	Patiënten (≥ 18 jaar) met geuroverlast door oncologische ulcera in de palliatieve fase
I	Antibiotica, verbandmaterialen, wondreiniging
C	Andere interventie, geen interventie, placebo
O	Geur, kwaliteit van leven

Zoeken en selecteren van studies

Op 28 april 2023 is in de databases OVID Medline, EMBASE, CENTRAL en de Cochrane Database of Systematic Reviews gezocht naar wetenschappelijke literatuur. Deze zoekactie leverde 533 hits op. Na ontdebelling (N=65) en het verwijderen van artikelen in een niet-geselecteerde taal (N=11) bleven er 457 unieke hits over. De volledige zoekactie is beschreven in bijlage Evidence tabellen en GRADE profielen.

Deze resultaten zijn systematisch geselecteerd op basis van de volgende criteria:

Alle inclusiecriteria vermeld in de PICO;

Studietype: systematische reviews, meta-analyses, RCT's; voor systematische reviews en meta-analyses waren bijkomende criteria: zoektocht in minstens twee databases, en kwaliteitsbeoordeling van de geïncludeerde studies; abstracts, letters en editorials werden uitgesloten;

Taal: Engels, Nederlands;

Periode: geen limiet

In eerste instantie zijn de titel en abstract van de referenties beoordeeld. Hiervan werden 28 referenties geïncludeerd voor beoordeling op basis van het volledig artikel. Uiteindelijk bleven 6 systematische reviews [Adderley 2014, da Costa Santos 2010, Finlayson 2017, Gethin 2023, Ramasubbu 2017, Wiese 2023] en 6 RCT's [Ashford 1984, Bower 1992, Kalemikerakis 2012, Lian 2014, Upright 1994, Villela-Castro 2018] over.

Zoekstrategie

Ovid MEDLINE(R) <1946 to April Week 4 2023>

- 1 ((neoplas* or cancer\$ or carcin* or tumo\$ or metasta* or malign*) adj2 (wound\$ or ulcer*)).mp. (5578)
- 2 Pyoderma gangrenosum/ (2559)
- 3 exp Skin Ulcer/ and exp Neoplasms/ (3000)
- 4 Ulcer/ and exp Skin Neoplasms/ (195)
- 5 (fungat* adj3 (wound* or tumor* or tumour* or lesion* or ulcer*)).tw. (320)
- 6 (smelly adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (12)
- 7 (malodorous adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (91)
- 8 ((melanoma or carcinoma or sarcoma or metasta*) adj5 ulcer*).tw. (2203)
- 9 ((cutaneous or skin) adj3 metastas\$).mp. (4122)
- 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (16423)
- 11 exp Odorants/ (22589)
- 12 odor\$.mp. (39317)
- 13 odour\$.mp. (5825)
- 14 exp Smell/ (18088)
- 15 smell\$.mp. (25387)
- 16 11 or 12 or 13 or 14 or 15 (56076)
- 17 10 and 16 (200)

Ovid MEDLINE(R) Epub Ahead of Print <May 05, 2023>, Ovid MEDLINE(R) Daily Update <May 05, 2023>

- 1 ((neoplas* or cancer\$ or carcin* or tumo\$ or metasta* or malign*) adj2 (wound\$ or ulcer*)).mp. (72)
- 2 Pyoderma gangrenosum/ (0)
- 3 exp Skin Ulcer/ and exp Neoplasms/ (0)
- 4 Ulcer/ and exp Skin Neoplasms/ (0)

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- 5 (fungat* adj3 (wound* or tumor* or tumour* or lesion* or ulcer*)).tw. (8)
- 6 (smelly adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (0)
- 7 (malodorous adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (0)
- 8 ((melanoma or carcinoma or sarcoma or metasta*) adj5 ulcer*).tw. (20)
- 9 ((cutaneous or skin) adj3 metastas\$.mp. (35)
- 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (126)
- 11 exp Odorants/ (21)
- 12 odor\$.mp. (423)
- 13 odour\$.mp. (63)
- 14 exp Smell/ (20)
- 15 smell\$.mp. (312)
- 16 11 or 12 or 13 or 14 or 15 (721)
- 17 10 and 16 (4)

Cochrane Library

- #1 MeSH descriptor: [Pyoderma Gangrenosum] explode all trees
- #2 MeSH descriptor: [Skin Ulcer] explode all trees
- #3 MeSH descriptor: [Neoplasms] explode all trees
- #4 #2 and #3
- #5 MeSH descriptor: [Ulcer] explode all trees
- #6 MeSH descriptor: [Skin Neoplasms] explode all trees
- #7 #5 and #6
- #8 (fungat* NEAR/3 (wound* or tumor* or tumour* or lesion* or ulcer*)):ti,ab
- #9 (smelly NEAR/3 (wound* or tumor* or tumour* or ulcer*)):ti,ab
- #10 (malodorous NEAR/3 (wound* or tumor* or tumour* or ulcer*)):ti,ab
- #11 ((melanoma or carcinoma or sarcoma or metasta*) NEAR/5 ulcer*):ti,ab
- #12 ((cutaneous or skin) NEAR/3 metastas*):ti,ab
- #13 #1 or #4 or #7 or #8 or #9 or #10 or #11 or #12

Embase

- | | | |
|------|---|---------|
| #1. | 'pyoderma gangrenosum'/exp | 6869 |
| #2. | 'skin ulcer'/exp | 90179 |
| #3. | 'neoplasm'/exp | 5949824 |
| #4. | #2 AND #3 | 12793 |
| #5. | 'ulcer'/exp | 320103 |
| #6. | 'skin tumor'/exp | 265988 |
| #7. | #5 AND #6 | 8900 |
| #8. | (fungat* NEAR/3 (wound* OR tumor* OR tumour* OR lesion* OR ulcer*)):ti,ab | 694 |
| #9. | (smelly NEAR/3 (wound* OR tumor* OR tumour* OR ulcer*)):ti,ab | 17 |
| #10. | (malodorous NEAR/3 (wound* OR tumor* OR tumour* OR ulcer*)):ti,ab | 133 |
| #11. | ((melanoma OR carcinoma OR sarcoma OR metasta*) NEAR/5 ulcer*):ti,ab | 3480 |
| #12. | ((cutaneous OR skin) NEAR/3 metastas*):ti,ab | 6715 |
| #13. | #1 OR #4 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 | 33029 |
| #14. | 'fragrance'/exp | 29611 |
| #15. | odor*:ti,ab OR odour*:ti,ab | 48371 |
| #16. | 'odor'/exp | 34037 |
| #17. | smell*:ti,ab | 18704 |
| #18. | #14 OR #15 OR #16 OR #17 | 96674 |
| #19. | #13 AND #18 | 285 |
| #20. | #13 AND #18 AND ([article]/lim OR [article in press]/lim OR [review]/lim) AND ([dutch]/lim OR [english]/lim OR [french]/lim OR [german]/lim) AND ([embase]/lim OR [pubmed-not-medline]/lim) | 106 |

Tabel 3. Resultaten van zoekactie van onderzoeksvraag 1

Database	Aantal
Medline	200

PreMedline	4
Embase	106
CDSR	4
CENTRAL	219
Totaal aantal resultaten	533
Aantal geëxcludeerd (dubbelen en foute taal en jaartal)	76
Totaal aantal unieke resultaten	457

Tabel 4. Overzicht van geëxcludeerde studies gebaseerd op beoordeling van de volledige tekst van onderzoeksvraag 1

Referentie	Reden voor exclusie
Adderley U, Smith R. Topical agents and dressings for fungating wounds. <i>Cochrane Database Syst Rev.</i> 2007(2):CD003948.	Updated
Bale S, Tebbie N, Price P. A topical metronidazole gel used to treat malodorous wounds. <i>Br J Nurs.</i> 2004;13(11):S4-11.	Geen oncologische ulcera
Darwin ES, Thaler ER, Lev-Tov HA. Wound odor: current methods of treatment and need for objective measures. <i>G Ital Dermatol Venereol.</i> 2019;154(2):127-36.	Narrative review
Fromantin I, Watson S, Baffie A, Rivat A, Falcou MC, Kriegel I, et al. A prospective, descriptive cohort study of malignant wound characteristics and wound care strategies in patients with breast cancer. <i>Ostomy Wound Manage.</i> 2014;60(6):38-48.	Geen vergelijkende studie
Hu JK, Ligtenberg KG, Leventhal J, Bunick CG. Successful management of malodor from fungating tumors using crushed metronidazole tablets. <i>JAAD Case Reports.</i> 2020;6(1):26-9.	Case reports
Lacouture M, Goldfarb S, Markova A, Chawla S, Dewnani K, Iacobucci M, et al. Phase 1/2 study of topical submicron particle paclitaxel for cutaneous metastases of breast cancer. <i>Breast cancer research and treatment [Internet].</i> 2022; 194(1):[57-64 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-02396831/full	Interventie niet relevant voor PICO
Lee G, Anand SC, Rajendran S, Walker I. Efficacy of commercial dressings in managing malodorous wounds. <i>Br J Nurs.</i> 2007;16(6):S14, S6, S8-20.	In vitro studie
McDonald A, Lesage P. Palliative management of pressure ulcers and malignant wounds in patients with advanced illness. <i>J Palliat Med.</i> 2006;9(2):285-95.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Ormerod A, Thomas K, Craig F, Mitchell E, Greenlaw N, Norrie J, et al. Comparison of the two most commonly used treatments for pyoderma gangrenosum: results of the STOP GAP randomised controlled trial. <i>BMJ (Clinical research ed) [Internet].</i> 2015; 350:[h2958 p.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01076405/full	Geen oncologische ulcera
Paul JC, Pieper BA. Topical metronidazole for the treatment of wound odor: a review of the literature. <i>Ostomy Wound Manage.</i> 2008;54(3):18-27; quiz 8-9.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Praptiwi A. The potentials of honey in managing breast cancer wounds: A literature review. <i>Asian Journal of Pharmaceutical and Clinical Research.</i> 2017;10(Special Issue may):102-7.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Seaman S. Management of malignant fungating wounds in advanced cancer. <i>Semin Oncol Nurs.</i> 2006;22(3):185-93.	Narrative review

Tang J, Qin FH, Chen Y, Liu Y, Nong L, Zhong WN, et al. Topical oxygen therapy can reduce related symptoms of malignant fungating wounds in breast cancer: A retrospective observational case series study. <i>International Journal of Clinical and Experimental Medicine</i> . 2020;13(11):8526-34.	Interventie niet relevant voor PICO
Tsichlakidou A, Govina O, Vasilopoulos G, Kavga A, Vastardi M, Kalemikerakis I. Intervention for symptom management in patients with malignant fungating wounds - a systematic review. <i>J</i> . 2019;24(3):1301-8.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Uebach B, Krull E, Simon ST, Bausewein C, Voltz R, Doll A. [Guideline-based Care for patients with malignant lesions : The new S3 guideline for patients with incurable cancer]. <i>Hno</i> . 2022;70(3):167-78.	Methodologie onvoldoende toegelicht
Uebach B, Krull E, Simon ST, Bausewein C, Voltz R, Doll A. Guideline-based Care for patients with malignant lesions: The new S3 guideline for patients with incurable cancer. <i>Onkologe</i> . 2020;26(7):642-53.	Geen full-text

Onderzoeksvraag 2

Om de uitgangsvraag van deze module te kunnen beantwoorden, is een systematisch literatuuronderzoek uitgevoerd. De onderzoeksvraag die hiervoor is opgesteld is PICO-gestructureerd en luidt: Wat is het effect van verbandmateriaal, radiotherapie, tranexaminezuur, xylometazoline, adrenaline, embolisatie, elektrocoagulatie, of zilvernitraat op bloedverlies bij patiënten met een oncologische ulcus in de palliatieve fase?

Onderzoeksvraag

P	Patiënten (≥ 18 jaar) met acute of chronische bloeding bij oncologische ulcera in de palliatieve fase
I	Verbandmateriaal, radiotherapie, tranexaminezuur, xylometazoline, adrenaline, embolisatie, elektrocoagulatie, zilvernitraat
C	Andere interventie, geen interventie, placebo
O	Bloedverlies, kwaliteit van leven

Zoeken en selecteren van studies

Op 28 april 2023 is in de databases OVID Medline, EMBASE, CENTRAL en de Cochrane Database of Systematic Reviews gezocht naar wetenschappelijke literatuur. Deze zoekactie leverde 3783 hits op. Na ontdubbeling (N=264) en het verwijderen van artikelen in een niet-geselecteerde taal (N=125) bleven er 3394 unieke hits over. De volledige zoekactie is beschreven in bijlage Evidence tabellen en GRADE profielen.

Deze resultaten zijn systematisch geselecteerd op basis van de volgende criteria:

Alle inclusiecriteria vermeld in de PICO;

Studietype: systematische reviews, meta-analyses, RCT's; voor systematische reviews en meta-analyses waren bijkomende criteria: zoektocht in minstens twee databases, en kwaliteitsbeoordeling van de geïnccludeerde studies; abstracts, letters en editorials werden uitgesloten;

Taal: Engels, Nederlands;

Periode: geen limiet

In eerste instantie zijn de titel en abstract van de referenties beoordeeld. Hiervan werden 30 referenties geïnccludeerd voor beoordeling op basis van het volledig artikel. Uiteindelijk bleven 2 systematische reviews [Adderley 2014, Firmino 2021] en 1 RCT [Firmino 2023] over.

Zoekstrategie

Ovid MEDLINE(R) <1946 to April Week 3 2023>

- 1 ((neoplas* or cancer\$ or carcin* or tumor\$ or metasta* or malign*) adj2 (wound\$ or ulcer*)).mp. (5576)
- 2 Pyoderma gangrenosum/ (2559)
- 3 exp Skin Ulcer/ and exp Neoplasms/ (3000)
- 4 Ulcer/ and exp Skin Neoplasms/ (195)
- 5 (fungat* adj3 (wound* or tumor* or tumour* or lesion* or ulcer*)).tw. (320)
- 6 (smelly adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (12)
- 7 (malodorous adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (91)
- 8 ((melanoma or carcinoma or sarcoma or metasta*) adj5 ulcer*).tw. (2203)
- 9 ((cutaneous or skin) adj3 metastas\$).mp. (4119)

- 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (16418)
- 11 exp Hemorrhage/ (361628)
- 12 h?emorrhag*.mp. (393529)
- 13 (blood adj los\$).mp. (63820)
- 14 bleed\$.mp. (215301)
- 15 11 or 12 or 13 or 14 (639802)
- 16 10 and 15 (895)

Ovid MEDLINE(R) Epub Ahead of Print <April 27, 2023>, Ovid MEDLINE(R) Daily Update <April 27, 2023>

- 1 ((neoplas* or cancer\$ or carcin* or tumo\$ or metasta* or malig*) adj2 (wound\$ or ulcer*)).mp. (72)
- 2 Pyoderma gangrenosum/ (0)
- 3 exp Skin Ulcer/ and exp Neoplasms/ (0)
- 4 Ulcer/ and exp Skin Neoplasms/ (0)
- 5 (fungat* adj3 (wound* or tumor* or tumour* or lesion* or ulcer*)).tw. (8)
- 6 (smelly adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (0)
- 7 (malodorous adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (0)
- 8 ((melanoma or carcinoma or sarcoma or metasta*) adj5 ulcer*).tw. (20)
- 9 ((cutaneous or skin) adj3 metastas\$).mp. (35)
- 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (126)
- 11 exp Hemorrhage/ (265)
- 12 h?emorrhag*.mp. (3721)
- 13 (blood adj los\$).mp. (1043)
- 14 bleed\$.mp. (3427)
- 15 11 or 12 or 13 or 14 (7373)
- 16 10 and 15 (11)

Cochrane Library

- #1 MeSH descriptor: [Pyoderma Gangrenosum] explode all trees
- #2 MeSH descriptor: [Skin Ulcer] explode all trees
- #3 MeSH descriptor: [Neoplasms] explode all trees
- #4 #2 and #3
- #5 MeSH descriptor: [Ulcer] explode all trees
- #6 MeSH descriptor: [Skin Neoplasms] explode all trees
- #7 #5 and #6
- #8 (fungat* NEAR/3 (wound* or tumor* or tumour* or lesion* or ulcer*)):ti,ab
- #9 (smelly NEAR/3 (wound* or tumor* or tumour* or ulcer*)):ti,ab
- #10 (malodorous NEAR/3 (wound* or tumor* or tumour* or ulcer*)):ti,ab
- #11 ((melanoma or carcinoma or sarcoma or metasta*) NEAR/5 ulcer*):ti,ab
- #12 ((cutaneous or skin) NEAR/3 metastas*):ti,ab
- #13 #1 or #4 or #7 or #8 or #9 or #10 or #11 or #12

Embase

- | | | |
|------|---|---------|
| #1. | 'pyoderma gangrenosum'/exp | 6869 |
| #2. | 'skin ulcer'/exp | 90179 |
| #3. | 'neoplasm'/exp | 5949824 |
| #4. | #2 AND #3 | 12793 |
| #5. | 'ulcer'/exp | 320103 |
| #6. | 'skin tumor'/exp | 265988 |
| #7. | #5 AND #6 | 8900 |
| #8. | (fungat* NEAR/3 (wound* OR tumor* OR tumour* OR lesion* OR ulcer*)):ti,ab | 694 |
| #9. | (smelly NEAR/3 (wound* OR tumor* OR tumour* OR ulcer*)):ti,ab | 17 |
| #11. | ((melanoma OR carcinoma OR sarcoma OR metasta*) NEAR/5 ulcer*):ti,ab | 3480 |
| #12. | ((cutaneous OR skin) NEAR/3 metastas*):ti,ab | 6715 |
| #13. | #1 OR #4 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 | 33029 |
| #14. | 'bleeding'/exp | 1160674 |
| #15. | hemorrhag*:ti,ab OR haemorrhag*:ti,ab | 411085 |

#16.	(blood NEAR/1 los*):ti,ab	103951
#17.	bleed*:ti,ab	408248
#18.	#14 OR #15 OR #16 OR #17	1378331
#19.	#13 AND #18	4250
#20.	#13 AND #18 AND ([article]/lim OR [article in press]/lim OR [review]/lim) AND ([dutch]/lim OR [english]/lim OR [french]/lim OR [german]/lim) AND ([embase]/lim OR [pubmed-not-medline]/lim)	2654

Tabel 3. Resultaten van zoekactie van onderzoeksvraag 2

Database	Aantal
Medline	895
PreMedline	11
Embase	2654
CDSR	4
CENTRAL	219
Totaal aantal resultaten	3783
Aantal geëxcludeerd (dubbelen en foute taal en jaartal)	389
Totaal aantal unieke resultaten	3394

Tabel 4. Overzicht van geëxcludeerde studies gebaseerd op beoordeling van de volledige tekst van onderzoeksvraag 2

Referentie	Reden voor exclusie
Adderley U, Smith R. Topical agents and dressings for fungating wounds. Cochrane Database Syst Rev. 2007(2):CD003948.	Updated
Agoston D, Baltas E, Ocsai H, Ratkai S, Lazar P, Korom I, et al. Evaluation of calcium electroporation for the treatment of cutaneous metastases: a double blinded randomised controlled phase II trial. Cancers [Internet]. 2020; 12(1). Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-02129206/full	Interventie niet relevant voor PICO
Ashford R, Plant G, Maher J, Teare L. Double-blind trial of metronidazole in malodorous ulcerating tumours. Lancet (london, england) [Internet]. 1984; 1(8388):[1232-3 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00034598/full	Letter; bloedverlies is geen uitkomst
Bale S, Tebbie N, Price P. A topical metronidazole gel used to treat malodorous wounds. British journal of nursing (Mark Allen Publishing) [Internet]. 2004; 13(11):[S4-11 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00467547/full .	Uitkomst is lekkage; gaat niet over oncologische ulcera
Bower M, Stein R, Evans T, Hedley A, Pert P, Coombes R. A double-blind study of the efficacy of metronidazole gel in the treatment of malodorous fungating tumours. European journal of cancer (Oxford, England : 1990) [Internet]. 1992; 28a(4-5):[888-9 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00087020/full	Bloeding is geen uitkomst
da Costa Santos CM, de Mattos Pimenta CA, Nobre MR. A systematic review of topical treatments to control the odor of malignant fungating wounds. J Pain Symptom Manage. 2010;39(6):1065-76.	Bloeding is geen uitkomst
Falk H, Matthiessen L, Wooler G, Gehl J. Calcium electroporation for treatment of cutaneous metastases; a randomized double-blinded phase II study, comparing the effect of calcium electroporation with electrochemotherapy. Acta oncologica (Stockholm, Sweden) [Internet]. 2018; 57(3):[311-9 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01622067/full .	Interventie niet relevant voor PICO
Firmino F, Santos J, Meira KC, de Araujo JL, Junior VA, de Gouveia Santos VLC. Regenerated oxidised cellulose versus calcium alginate in controlling bleeding from	Studie protocol

malignant breast cancer wounds: randomised control trial study protocol. <i>J Wound Care</i> . 2020;29(1):52-60.	
Fromantin I, Watson S, Baffie A, Rivat A, Falcou MC, Kriegel I, et al. A prospective, descriptive cohort study of malignant wound characteristics and wound care strategies in patients with breast cancer. <i>Ostomy Wound Manage</i> . 2014;60(6):38-48.	Geen vergelijkende studie
Furka A, Simkó C, Kostyál L, Szabó I, Valikovics A, Fekete G, et al. Treatment Algorithm for Cancerous Wounds: A Systematic Review. <i>Cancers</i> . 2022;14(5).	Narrative review
Gaudy C, Richard M, Folchetti G, Bonerandi J, Grob J. Randomized controlled study of electrochemotherapy in the local treatment of skin metastases of melanoma. <i>Journal of cutaneous medicine and surgery [Internet]</i> . 2006; 10(3):[115-21 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00609142/full .	Interventie niet relevant voor PICO
Jooya A, Talla K, Wei R, Huang F, Dennis K, Gaudet M. Systematic review of brachytherapy for symptom palliation. <i>Brachytherapy</i> . 2022;21(6):912-32.	Geen vergelijkende studies
Jull AB, Rodgers A, Walker N. Honey as a topical treatment for wounds. <i>Cochrane Database Syst Rev</i> . 2008(4).	Geen oncologische ulcera
Kalemikerakis J, Vardaki Z, Fouka G, Vlachou E, Gkovina U, Kosma E, et al. Comparison of foam dressings with silver versus foam dressings without silver in the care of malodorous malignant fungating wounds. <i>J [Internet]</i> . 2012; 17(3):[560-4 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00845638/full .	Bloeding is geen uitkomst
Leonard R, Hardy J, van TG, Houston S, Simmonds P, David M, et al. Randomized, double-blind, placebo-controlled, multicenter trial of 6% miltefosine solution, a topical chemotherapy in cutaneous metastases from breast cancer. <i>J Clin Oncol [Internet]</i> . 2001; 19(21):[4150-9 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00375071/full .	Interventie niet relevant voor PICO
Lian S, Xu Y, Goh S, Aw F. Comparing the effectiveness of green tea versus topical metronidazole powder in malodorous control of fungating malignant wounds in a controlled randomised study. <i>Proceedings of singapore healthcare [Internet]</i> . 2014; 23(1):[3-12 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00989065/full .	Bloeding is geen uitkomst
McDonald A, Lesage P. Palliative management of pressure ulcers and malignant wounds in patients with advanced illness. <i>J Palliat Med</i> . 2006;9(2):285-95.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Nicodeme M, Dureau S, Cheron M, Kriegel I, Trenchand M, Bauer P, et al. Frequency and Management of Hemorrhagic Malignant Wounds: A Retrospective, Single-Center, Observational Study. <i>J Pain Symptom Manage</i> . 2021;62(1):134-40.	Geen vergelijkende studie
Ormerod A, Thomas K, Craig F, Mitchell E, Greenlaw N, Norrie J, et al. Comparison of the two most commonly used treatments for pyoderma gangrenosum: results of the STOP GAP randomised controlled trial. <i>BMJ (Clinical research ed) [Internet]</i> . 2015; 350:[h2958 p.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01076405/full	Geen oncologische ulcera
Praptiwi A. The potentials of honey in managing breast cancer wounds: A literature review. <i>Asian Journal of Pharmaceutical and Clinical Research</i> . 2017;10(Special Issue may):102-7.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Putri IL, Adzalika LB, Pramanasari R, Wungu CDK. Negative pressure wound therapy versus conventional wound care in cancer surgical wounds: A meta-analysis of observational studies and randomised controlled trials. <i>Int Wound J</i> . 2022;19(6):1578-93.	Populatie en interventie niet relevant voor PICO
Ramasubbu DA, Smith V, Hayden F, Cronin P. Systemic antibiotics for treating malignant wounds. <i>Cochrane Database Syst Rev</i> . 2017;8:CD011609.	Interventie niet relevant voor PICO
Seaman S. Management of malignant fungating wounds in advanced cancer. <i>Semin Oncol Nurs</i> . 2006;22(3):185-93.	Narrative review

Tang J, Qin FH, Chen Y, Liu Y, Nong L, Zhong WN, et al. Topical oxygen therapy can reduce related symptoms of malignant fungating wounds in breast cancer: A retrospective observational case series study. International Journal of Clinical and Experimental Medicine. 2020;13(11):8526-34.	Interventie niet relevant voor PICO
Tsichlakidou A, Govina O, Vasilopoulos G, Kavga A, Vastardi M, Kalemikerakis I. Intervention for symptom management in patients with malignant fungating wounds - a systematic review. J. 2019;24(3):1301-8.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Uebach B, Krull E, Simon ST, Bausewein C, Voltz R, Doll A. [Guideline-based Care for patients with malignant lesions : The new S3 guideline for patients with incurable cancer]. Hno. 2022;70(3):167-78.	Methodologie onvoldoende toegelicht
Uebach B, Krull E, Simon ST, Bausewein C, Voltz R, Doll A. Guideline-based Care for patients with malignant lesions: The new S3 guideline for patients with incurable cancer. Onkologe. 2020;26(7):642-53.	Geen full-text

Onderzoeksvraag 3

Om de uitgangsvraag van deze module te kunnen beantwoorden, is een systematisch literatuuronderzoek uitgevoerd. De onderzoeksvraag die hiervoor is opgesteld is PICO-gestructureerd en luidt: Wat is het effect van systemische en lokale pijnstilling, radiotherapie en verbandmateriaal op pijn bij patiënten met een oncologische ulcus in de palliatieve fase?

Onderzoeksvraag

P	Patiënten (≥ 18 jaar) met pijn bij oncologische ulcera in de palliatieve fase
I	Systemisch en lokale pijnstilling, radiotherapie, verbandmateriaal
C	Andere interventie, geen interventie, placebo
O	Pijn, kwaliteit van leven

Zoeken en selecteren van studies

Op 28 april 2023 is in de databases OVID Medline, EMBASE, CENTRAL en de Cochrane Database of Systematic Reviews gezocht naar wetenschappelijke literatuur. Deze zoekactie leverde 6030 hits op. Na ontdebelling (N=627) en het verwijderen van artikelen in een niet-geselecteerde taal (N=108) bleven er 5295 unieke hits over. De volledige zoekactie is beschreven in bijlage Evidence tabellen en GRADE profielen.

Deze resultaten zijn systematisch geselecteerd op basis van de volgende criteria:

Alle inclusiecriteria vermeld in de PICO;

Studietype: systematische reviews, meta-analyses, RCT's; voor systematische reviews en meta-analyses waren bijkomende criteria: zoektocht in minstens twee databases, en kwaliteitsbeoordeling van de geïnccludeerde studies; abstracts, letters en editorials werden uitgesloten;

Taal: Engels, Nederlands;

Periode: geen limiet

In eerste instantie zijn de titel en abstract van de referenties beoordeeld. Hiervan werden 44 referenties geïnccludeerd voor beoordeling op basis van het volledig artikel. Uiteindelijk bleven 2 systematische reviews [Adderley 2014, Finlayson 2017] en 2 RCT's [Lund-Nielsen 2011, Peng 2019] over.

Zoekstrategie

Ovid MEDLINE(R) <1946 to April Week 3 2023>

- 1 ((neoplas* or cancer\$ or carcin* or tumo\$ or metasta* or malig*) adj2 (wound\$ or ulcer*)).mp. (5576)
- 2 Pyoderma gangrenosum/ (2559)
- 3 exp Skin Ulcer/ and exp Neoplasms/ (3000)
- 4 Ulcer/ and exp Skin Neoplasms/ (195)
- 5 (fungat* adj3 (wound* or tumor* or tumour* or lesion* or ulcer*)).tw. (320)
- 6 (smelly adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (12)
- 7 (malodorous adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (91)
- 8 ((melanoma or carcinoma or sarcoma or metasta*) adj5 ulcer*).tw. (2203)
- 9 ((cutaneous or skin) adj3 metastas\$).mp. (4119)

- 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (16418)
- 11 exp PAIN/ (454457)
- 12 exp Pain Management/ (40517)
- 13 pain*.ti,ab. (697354)
- 14 exp ANALGESICS/ (585391)
- 15 analges*.ti,ab. (124186)
- 16 11 or 12 or 13 or 14 or 15 (1367388)
- 17 10 and 16 (1445)

Ovid MEDLINE(R) Epub Ahead of Print <April 27, 2023>, Ovid MEDLINE(R) Daily Update <April 27, 2023>

- 1 ((neoplas* or cancer\$ or carcin* or tumor\$ or metasta* or malig*) adj2 (wound\$ or ulcer*)).mp. (72)
- 2 Pyoderma gangrenosum/ (0)
- 3 exp Skin Ulcer/ and exp Neoplasms/ (0)
- 4 Ulcer/ and exp Skin Neoplasms/ (0)
- 5 (fungat* adj3 (wound* or tumor* or tumour* or lesion* or ulcer*)).tw. (8)
- 6 (smelly adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (0)
- 7 (malodorous adj3 (wound* or tumor* or tumour* or ulcer*)).tw. (0)
- 8 ((melanoma or carcinoma or sarcoma or metasta*) adj5 ulcer*).tw. (20)
- 9 ((cutaneous or skin) adj3 metastas\$).mp. (35)
- 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (126)
- 11 exp PAIN/ (546)
- 12 exp Pain Management/ (38)
- 13 pain*.ti,ab. (12945)
- 14 exp ANALGESICS/ (339)
- 15 analges*.ti,ab. (1646)
- 16 11 or 12 or 13 or 14 or 15 (13836)
- 17 10 and 16 (15)

Cochrane Library

- #1 MeSH descriptor: [Pyoderma Gangrenosum] explode all trees
- #2 MeSH descriptor: [Skin Ulcer] explode all trees
- #3 MeSH descriptor: [Neoplasms] explode all trees
- #4 #2 and #3
- #5 MeSH descriptor: [Ulcer] explode all trees
- #6 MeSH descriptor: [Skin Neoplasms] explode all trees
- #7 #5 and #6
- #8 (fungat* NEAR/3 (wound* or tumor* or tumour* or lesion* or ulcer*)):ti,ab
- #9 (smelly NEAR/3 (wound* or tumor* or tumour* or ulcer*)):ti,ab
- #10 (malodorous NEAR/3 (wound* or tumor* or tumour* or ulcer*)):ti,ab
- #11 ((melanoma or carcinoma or sarcoma or metasta*) NEAR/5 ulcer*):ti,ab
- #12 ((cutaneous or skin) NEAR/3 metastas*):ti,ab
- #13 #1 or #4 or #7 or #8 or #9 or #10 or #11 or #12

Embase

- | | | |
|------|---|---------|
| #1. | 'pyoderma gangrenosum'/exp | 6869 |
| #2. | 'skin ulcer'/exp | 90179 |
| #3. | 'neoplasm'/exp | 5949824 |
| #4. | #2 AND #3 | 12793 |
| #5. | 'ulcer'/exp | 320103 |
| #6. | 'skin tumor'/exp | 265988 |
| #7. | #5 AND #6 | 8900 |
| #8. | (fungat* NEAR/3 (wound* OR tumor* OR tumour* OR lesion* OR ulcer*)):ti,ab | 694 |
| #9. | (smelly NEAR/3 (wound* OR tumor* OR tumour* OR ulcer*)):ti,ab | 17 |
| #10. | (malodorous NEAR/3 (wound* OR tumor* OR tumour* OR ulcer*)):ti,ab | 133 |
| #11. | ((melanoma OR carcinoma OR sarcoma OR metasta*) NEAR/5 ulcer*):ti,ab | 3480 |
| #12. | ((cutaneous OR skin) NEAR/3 metastas*):ti,ab | 6715 |

#13.	#1 OR #4 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12	33029
#14.	'pain'/exp	1640670
#15.	'analgesia'/exp	203207
#16.	pain*.ti,ab	1239609
#17.	analges*.ti,ab	204499
#18.	#14 OR #15 OR #16 OR #17	2147207
#19.	#13 AND #18	6808
#20.	#13 AND #18 AND ([article]/lim OR [article in press]/lim OR [review]/lim) AND ([dutch]/lim OR [english]/lim OR [french]/lim OR [german]/lim) AND ([embase]/lim OR [pubmed-not-medline]/lim)	4347

Tabel 3. Resultaten van zoekactie van onderzoeksvraag 3

Database	Aantal
Medline	1445
PreMedline	15
Embase	4347
CDSR	4
CENTRAL	219
Totaal aantal resultaten	6030
Aantal geëxcludeerd (dubbelen en foute taal en jaartal)	735
Totaal aantal unieke resultaten	5295

Tabel 4. Overzicht van geëxcludeerde studies gebaseerd op beoordeling van de volledige tekst van onderzoeksvraag 3

Referentie	Reden voor exclusie
Adderley U, Smith R. Topical agents and dressings for fungating wounds. <i>Cochrane Database Syst Rev.</i> 2007(2):CD003948.	Updated
Agoston D, Baltas E, Ocsai H, Ratkai S, Lazar P, Korom I, et al. Evaluation of calcium electroporation for the treatment of cutaneous metastases: a double blinded randomised controlled phase II trial. <i>Cancers [Internet].</i> 2020; 12(1). Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-02129206/full	Interventie niet relevant voor PICO
Alexander S. Malignant fungating wounds: managing pain, bleeding and psychosocial issues. <i>J Wound Care.</i> 2009;18(10):418-25.	Narrative review
Ashford R, Plant G, Maher J, Teare L. Double-blind trial of metronidazole in malodorous ulcerating tumours. <i>Lancet (london, england) [Internet].</i> 1984; 1(8388):[1232-3 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00034598/full	Letter; pijn is geen uitkomst
Bale S, Tebbie N, Price P. A topical metronidazole gel used to treat malodorous wounds. <i>Br J Nurs.</i> 2004;13(11):S4-11.	Geen oncologische ulcera
Bolton L. Evidence Corner: Evidence-based Care for Malignant Wounds. <i>Wounds.</i> 2016;28(6):214-6.	Beschrijving van 2 RCT's (die in de search gevonden werden)
Bower M, Stein R, Evans T, Hedley A, Pert P, Coombes R. A double-blind study of the efficacy of metronidazole gel in the treatment of malodorous fungating tumours. <i>European journal of cancer (Oxford, England : 1990) [Internet].</i> 1992; 28a(4-5):[888-9 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00087020/full	Pijn is geen uitkomst
da Costa Ferreira SA, Serna Gonzalez CV, Thum M, da Costa Faresin AA, Woo K, de Gouveia Santos VLC. Topical therapy for pain management in malignant fungating wounds: A scoping review. <i>J Clin Nurs.</i> 2022;02:02.	Geen kwaliteitsbeoordeling van geïnccludeerde studies

da Costa Santos CM, de Mattos Pimenta CA, Nobre MR. A systematic review of topical treatments to control the odor of malignant fungating wounds. <i>J Pain Symptom Manage.</i> 2010;39(6):1065-76.	Gaat niet over behandeling van pijn
Fabrizio T, Cagiano L, De Terlizzi F, Grieco MP. Neoadjuvant treatment by ECT in cutaneous malignant neoplastic lesions. <i>Journal of Plastic, Reconstructive and Aesthetic Surgery.</i> 2020;73(5):904-12.	Interventie niet relevant voor PICO
Falk H, Matthiessen L, Wooler G, Gehl J. Calcium electroporation for treatment of cutaneous metastases; a randomized double-blinded phase II study, comparing the effect of calcium electroporation with electrochemotherapy. <i>Acta oncologica (Stockholm, Sweden)</i> [Internet]. 2018; 57(3):[311-9 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01622067/full .	Interventie niet relevant voor PICO
Feroli M, Perrone AM, Buwenge M, Arcelli A, Zamagni A, Macchia G, et al. Electrochemotherapy of skin metastases from breast cancer: a systematic review. <i>Clinical and Experimental Metastasis.</i> 2021;38(1).	Interventie niet relevant voor PICO
Furka A, Simkó C, Kostyál L, Szabó I, Valikovics A, Fekete G, et al. Treatment Algorithm for Cancerous Wounds: A Systematic Review. <i>Cancers.</i> 2022;14(5).	Narrative review
Gaudy C, Richard MA, Folchetti G, Bonerandi JJ, Grob JJ. Randomized controlled study of electrochemotherapy in the local treatment of skin metastases of melanoma. <i>J Cutan Med Surg.</i> 2006;10(3):115-21.	Interventie niet relevant voor PICO
Jooya A, Talla K, Wei R, Huang F, Dennis K, Gaudet M. Systematic review of brachytherapy for symptom palliation. <i>Brachytherapy.</i> 2022;21(6):912-32.	Geen vergelijkende studies
Jull AB, Rodgers A, Walker N. Honey as a topical treatment for wounds. <i>Cochrane Database Syst Rev.</i> 2008(4).	Geen oncologische ulcera
Kalemikerakis J, Vardaki Z, Fouka G, Vlachou E, Gkovina U, Kosma E, et al. Comparison of foam dressings with silver versus foam dressings without silver in the care of malodorous malignant fungating wounds. <i>J</i> [Internet]. 2012; 17(3):[560-4 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00845638/full .	Pijn is geen uitkomst
Kammerlander G, Assadian O, Eberlein T, Zweitmuller P, Luchsinger S, Andriessen A. A clinical evaluation of the efficacy and safety of singlet oxygen in cleansing and disinfecting stagnating wounds. <i>J Wound Care.</i> 2011;20(4):149-50, 52, 54 passim.	Geen oncologische ulcera
Leonard R, Hardy J, van TG, Houston S, Simmonds P, David M, et al. Randomized, double-blind, placebo-controlled, multicenter trial of 6% miltefosine solution, a topical chemotherapy in cutaneous metastases from breast cancer. <i>J Clin Oncol</i> [Internet]. 2001; 19(21):[4150-9 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00375071/full .	Interventie niet relevant voor PICO
Lian S, Xu Y, Goh S, Aw F. Comparing the effectiveness of green tea versus topical metronidazole powder in malodorous control of fungating malignant wounds in a controlled randomised study. <i>Proceedings of singapore healthcare</i> [Internet]. 2014; 23(1):[3-12 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00989065/full .	Pijn is geen uitkomst
Lo S-F. A cost-effectiveness analysis of a silver dressing for malignant fungating wound of cancer patients. <i>EWMA journal</i> [Internet]. 2010; 10(2):[165, Abstract P16 pp.]. Available from: https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00755171/full .	Abstract
Matthiessen LW, Keshtgar M, Curatolo P, Kunte C, Grischke EM, Odili J, et al. Electrochemotherapy for Breast Cancer-Results From the INSPECT Database. <i>Clin Breast Cancer.</i> 2018;18(5):e909-e17.	Interventie niet relevant voor PICO
McDonald A, Lesage P. Palliative management of pressure ulcers and malignant wounds in patients with advanced illness. <i>J Palliat Med.</i> 2006;9(2):285-95.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Mekrut-Barrows C. Softening the pain of cancer-related wounds. <i>Ostomy Wound Manage.</i> 2006;52(9):12-3.	Case report

Murphy WT. Role of radiation therapy in the management of skin metastasis and bone pain in patients with carcinoma of the breast. <i>Cancer</i> . 1969;24(6):1331-7.	Narrative review
Ongarora BG. Recent technological advances in the management of chronic wounds: A literature review. <i>Health Science Reports</i> . 2022;5(3).	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Otaviano MH, Salles M, Ching TH, Dettoni JL, Coulibaly IGS, Fukunaga ET, et al. Topical Oxygen Jet Therapy (TOJT) for treating infected chronic surgical wounds. <i>Brazilian Journal of Infectious Diseases</i> . 2021;25(2).	Geen oncologische ulcera
Patel R, Mogoi RO, Ali SK. Topical Lidocaine and Morphine Gel Use for Malignant Wound Pain. <i>J Pain Pall Care Pharmacother</i> . 2023:1-2.	Letter
Paul JC, Pieper BA. Topical metronidazole for the treatment of wound odor: a review of the literature. <i>Ostomy Wound Manage</i> . 2008;54(3):18-27; quiz 8-9.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Praptiwi A. The potentials of honey in managing breast cancer wounds: A literature review. <i>Asian Journal of Pharmaceutical and Clinical Research</i> . 2017;10(Special Issue may):102-7.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Ramasubbu DA, Smith V, Hayden F, Cronin P. Systemic antibiotics for treating malignant wounds. <i>Cochrane Database Syst Rev</i> . 2017;8:CD011609.	Interventie niet relevant voor PICO
Seaman S. Management of malignant fungating wounds in advanced cancer. <i>Semin Oncol Nurs</i> . 2006;22(3):185-93.	Narrative review
Starace M, Carpanese MA, Pampaloni F, Dika E, Pileri A, Rubino D, et al. Management of malignant cutaneous wounds in oncologic patients. <i>Support Care Cancer</i> . 2022;30(9):7615-23.	Geen vergelijkende studie
Tang J, Qin FH, Chen Y, Liu Y, Nong L, Zhong WN, et al. Topical oxygen therapy can reduce related symptoms of malignant fungating wounds in breast cancer: A retrospective observational case series study. <i>International Journal of Clinical and Experimental Medicine</i> . 2020;13(11):8526-34.	Interventie niet relevant voor PICO
Tran QNH, Fancher T. Achieving analgesia for painful ulcers using topically applied morphine gel. <i>Journal of Supportive Oncology</i> . 2007;5(6):289-93.	Case report
Tsichlakidou A, Govina O, Vasilopoulos G, Kavga A, Vastardi M, Kalemikerakis I. Intervention for symptom management in patients with malignant fungating wounds - a systematic review. <i>J</i> . 2019;24(3):1301-8.	Geen kwaliteitsbeoordeling van geïnccludeerde studies
Uebach B, Krull E, Simon ST, Bausewein C, Voltz R, Doll A. [Guideline-based Care for patients with malignant lesions : The new S3 guideline for patients with incurable cancer]. <i>Hno</i> . 2022;70(3):167-78.	Methodologie onvoldoende toegelicht
Uebach B, Krull E, Simon ST, Bausewein C, Voltz R, Doll A. Guideline-based Care for patients with malignant lesions: The new S3 guideline for patients with incurable cancer. <i>Onkologe</i> . 2020;26(7):642-53.	Geen full-tekst
Villela-Castro DL, Santos V, Woo K. Polyhexanide Versus Metronidazole for Odor Management in Malignant (Fungating) Wounds: A Double-Blinded, Randomized, Clinical Trial. <i>J Wound Ostomy Continence Nurs</i> . 2018;45(5):413-8.	Interventie niet relevant voor PICO
Zeppetella G, Porzio G, Aielli F. Opioids applied topically to painful cutaneous malignant ulcers in a palliative care setting. <i>J Opioid Manag</i> . 2007;3(3):161-6.	Case reports