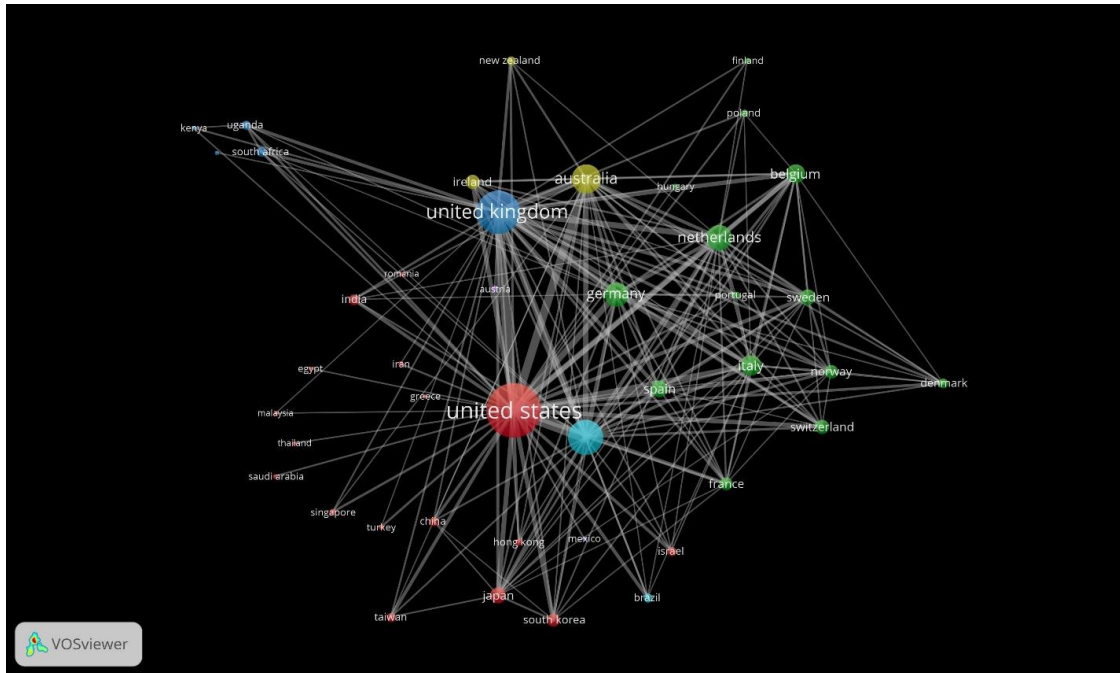
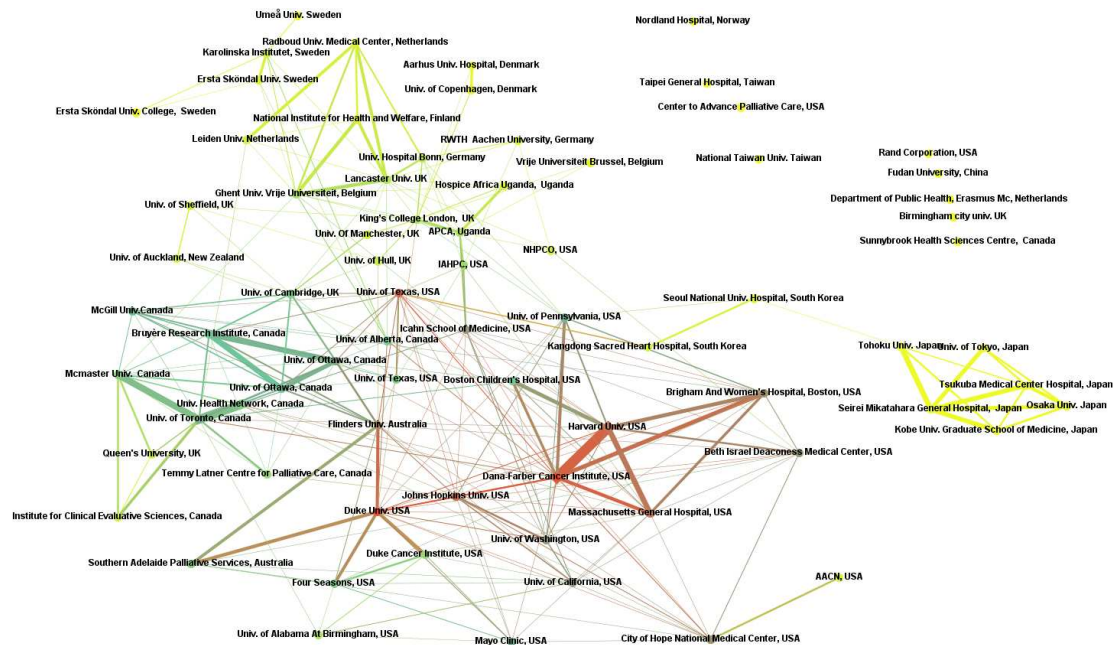


Supplemental Figure S1: Flow diagram of the identification of papers



Supplemental Figure S2: Strength of relationship across countries in palliative care research



Supplemental Figure S3: Network cooperation across institutions in the literature on palliative care

Nodes in the resultant network were recoloured and resized based on hyperlink-induced topic search value. Large nodes with red colour representing higher values that reflects high influential institutions, followed by nodes with green and yellow. The thickness line between nodes is also presenting a strong relationship between institutions.

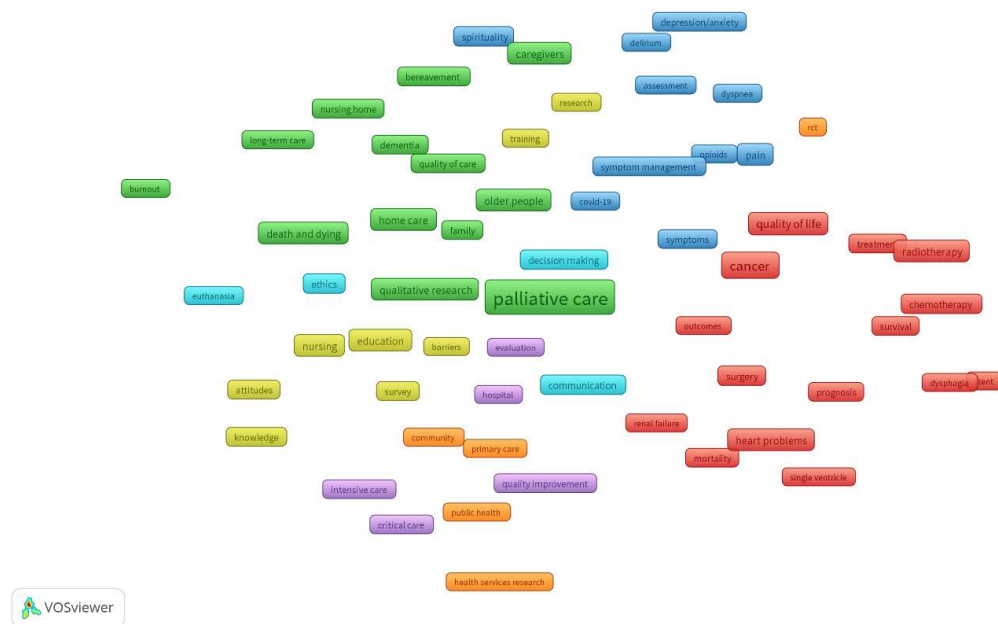


Figure 4: Clustering structure for palliative care research

Nodes in the resultant network were coloured to present each cluster. Cluster #1 (red colour) labelled as “chronic heart failure and cancer prognosis”. Cluster #2 (Green colour) labelled as “nursing home”. Cluster #3 (Blue colour) labelled as “pain and symptom management. Cluster #4 (Yellow colour) labelled as “end-of-life care knowledge and attitudes”. Cluster #5 (Purple colour) labelled as “quality improvement of services”. Cluster #6 (Ginzary colour) labelled as “palliative care ethics”. Cluster #7 (Orange colour) labelled as “ongoing assessment of palliative care services”.

Supplemental Table S1: Scopus and Web of Science search strategies for articles

Number	Search Term	Hits
Scopus		
#1	TITLE ("palliative care" OR "palliative medicine" OR "hospice care" OR "terminal care" OR "end-of-life care" OR "end of life care" OR "palliat*" OR "life-limiting" OR "life-threatening" OR "incurable disease")	52,216
#2	ABS ("palliative care" OR "palliative medicine" OR "hospice care" OR "terminal care" OR "end-of-life care" OR "end of life care" OR "palliat*" OR "life-limiting" OR "life-threatening" OR "incurable disease")	199,530
#3	#1 AND #2	30,443
#4	#3 (LIMIT-TO (PUBYEAR, 2002- 31 st December 2020)	24,793
#5	#4 EXCLUDE (SUBJAREA , "VETE")	24,686
#6	#5 LIMIT-TO (PUBSTAGE,"final"	24,336
#7	#6 LIMIT-TO (LANGUAGE, "English"	21,443
#8	#7 LIMIT-TO (TYPE, "ARTICLE"	16,621
Web of Science		
#1	TOPIC: ("palliative care" OR "palliative medicine" OR "hospice care" OR "terminal care" OR "end-of-life care" OR "end of life care" OR "palliat*" OR "life-limiting" OR "life-threatening" OR "incurable disease")	47,694
#2	#1 Timespan: 2002-31 st December 2020)	39,222
#3	#2 Refined by: LANGUAGES: (ENGLISH)	38,466
	Excluding: (VETERINARY SCIENCES OR ZOOLOGY)	36,466
#4	DOCUMENT TYPES: (ARTICLE)	19,520

Explanation of abbreviations: # = Search; ABS=Abstract

Supplemental Table S2: Most frequently study keywords in palliative care by years

Rank	keyword	2002-2008		2009-2014		2015-2020		Total 2002- December 31 st , 2020	
		Occurrences	Total link strength	Occurrences	Total link strength	Occurrences	Total link strength	Occurrences	Total link strength
1	Cancer	71	273	519	993	1073	1823	1933	3028
2	Pediatric	14	54	171	274	428	581	667	865
3	Quality of life	19	76	186	404	327	632	624	1102
4	Pain	29	121	190	416	272	444	565	935
5	Qualitative research	11	48	128	275	361	692	538	962
6	Education	21	74	111	223	285	476	462	750
7	Heart problems	17	56	130	161	247	253	440	421
8	Home care	12	54	112	236	258	533	439	817
9	Nursing	5	24	127	292	236	490	418	836
10	Radiotherapy	16	49	110	172	192	222	399	472
11	Caregivers	12	54	83	195	265	539	394	740
12	Older people	9	35	110	247	210	433	369	699
13	Death and dying	22	85	100	234	170	346	363	693
14	Communication	4	16	112	249	212	427	351	675
15	Chemotherapy	11	45	90	121	165	206	295	341
16	Advance care planning	3	12	50	131	196	418	257	525
17	Surgery	12	51	85	115	115	151	255	310
18	Ethics	6	25	91	198	109	200	241	440
19	Spirituality	2	9	63	125	113	185	205	332
20	Decision making	10	31	67	159	105	234	199	417
21	Dementia	8	32	63	168	101	248	188	430
22	Symptom management	8	41	60	127	93	188	186	352
23	Depression/anxiety	7	24	52	114	88	189	178	337
24	Intensive care	3	9	47	101	103	187	175	282
25	Prognosis	6	26	48	85	105	175	172	269
26	Survival	3	11	47	82	101	159	171	254

Rank	keyword	2002-2008		2009-2014		2015-2020		Total 2002- December 31 st , 2020	
		Occurrences	Total link strength	Occurrences	Total link strength	Occurrences	Total link strength	Occurrences	Total link strength
27	Attitudes	4	21	44	109	81	187	148	315
28	Treatment	3	6	46	59	62	81	142	154
29	Family	4	18	35	92	65	170	118	278
30	Symptoms	7	35	37	89	55	136	118	270
31	Bereavement	4	13	31	83	54	120	108	214
32	Survey	4	15	33	77	58	117	108	218
33	Quality of care	3	9	37	78	55	108	105	175
34	Palliative sedation	5	21	36	64	56	68	103	136
35	Critical care	4	17	23	53	55	103	97	174
36	Quality improvement	2	6	17	35	73	126	97	152
37	Knowledge	1	4	17	45	72	147	95	196
38	Mortality	1	5	19	39	62	95	94	137
39	Nursing home	19	75	24	54	50	117	93	193
40	Opioids	3	11	24	42	49	94	88	160
41	Randomized clinical trials	3	12	22	46	51	107	86	156
42	Delirium	2	5	29	81	51	91	85	163
43	Advance directives	3	10	20	39	42	91	81	151
44	Euthanasia	2	6	23	56	37	46	81	125
45	Primary care	2	11	15	25	48	104	76	140
46	Covid-19	0	0	0	0	74	95	74	95
47	Evaluation	3	13	25	64	35	69	74	134
48	Hospital	2	3	15	43	52	105	74	149
49	Renal failure	2	7	25	41	40	71	73	113
50	Dysphagia	7	26	20	35	33	39	71	81
51	Dyspnea	5	33	26	65	35	72	71	133
52	Assessment	13	55	27	68	30	59	70	139
53	Barriers	4	18	22	50	36	66	68	128
54	Community	4	12	21	41	35	59	67	118

Rank	keyword	2002-2008		2009-2014		2015-2020		Total 2002- December 31 st , 2020	
		Occurrences	Total link strength	Occurrences	Total link strength	Occurrences	Total link strength	Occurrences	Total link strength
55	Health services research	4	14	11	24	39	56	67	99
56	Long-term care	5	13	15	35	46	107	66	146
57	Gastric cancer	2	7	13	16	42	47	65	74
58	Research	5	21	20	54	24	67	65	126
59	Training	10	45	14	30	41	78	65	118
60	Burnout	2	9	12	21	50	58	64	70
61	Public health	3	13	15	34	37	57	63	94
62	Outcomes	1	5	18	43	36	50	62	95
63	Single ventricle	2	0	11	8	43	32	62	33