

Integrative therapies in cancer symptom management

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Background

- As guidelines and interest in integrative/complementary approaches for cancer symptom management grow, limited data exist on real-world practice patterns regarding patients' interests and integration of various integrative oncology (IO) modalities into cancer symptom management
- Our Integrative Medicine Center offers the following outpatient clinical services: physician consultation, acupuncture, oncology massage, personalized yoga therapy, music therapy, health psychology, physical therapy-exercise counseling, and nutrition counseling.
- An IO consultation is an opportunity to identify and evaluate symptoms that can be treated with appropriate integrative approaches.
- We investigated the patients interests in IO therapies for their symptom management and IO provider recommendations during the initial IO consultations.

- Physical**
- Exercise
 - Nutrition
 - Acupuncture
 - Oncology Massage
- Primary Oncology team
 - Physical Medicine & Rehabilitation
 - Supportive Care
 - Cancer Pain

- Mind-Body**
- Health Psychology
 - Meditation
 - Music Therapy
 - Tai Chi/Qi Gong
 - Yoga
- Psychiatry
 - Spiritual Care



- Social**
- Group Programs
- Social Work
 - Support Groups

Methods

The records of adult patients with cancer who underwent initial outpatient IO consultations at our cancer center for a representative 10-day period at the start of each month for 12 months starting January 1, 2017, were reviewed retrospectively. Patient demographic and medical characteristics and outpatient IO consultation details, including patient-reported outcome measures of symptom burden, were extracted.

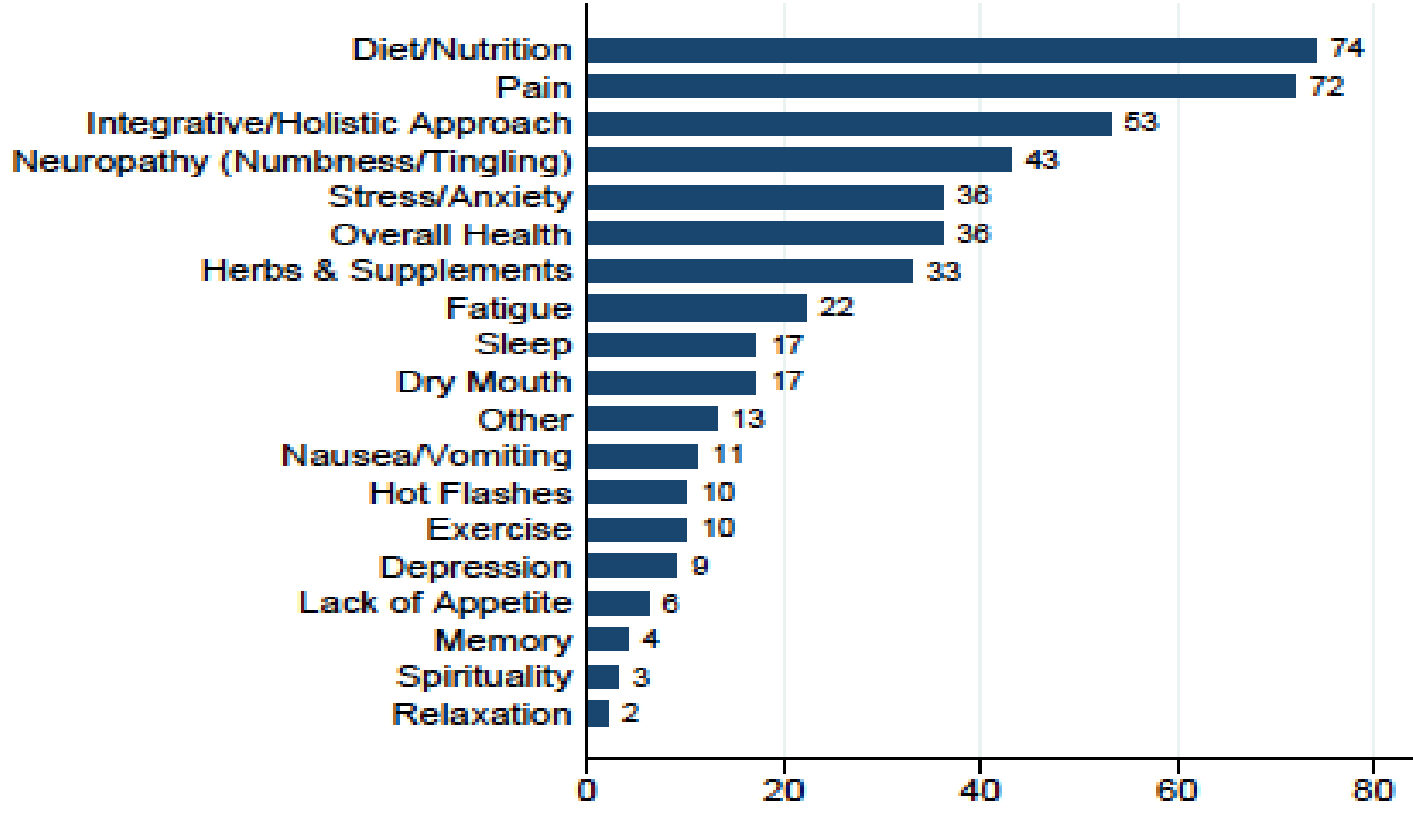
Assessment Measure: Modified Edmonton Symptom Assessment Score (ESAS) consists of 16 items: 10 core symptoms (pain, fatigue, nausea, depression, anxiety, drowsiness, loss of appetite, decreased sense of well-being, shortness of breath, and sleep difficulty) plus an additional 6 items including spiritual distress, financial distress, numbness/tingling, hot flashes, dry mouth, and memory problems. Respondents rate the symptoms they have experienced over the past 24 hours on a scale of 0 to 10, with 10 being the worst. A difference of 1 for an individual item is considered a clinically significant difference in that symptom. Patients routinely complete ESAS and patient-reported outcome assessments routinely before IO clinician consultation.

- Data analyses:** (version 16.0; StataCorp)
- Summary statistics was used for baseline characteristics and symptom scores.
 - Logistic regression was used to calculate odds ratios (ORs) for the secondary outcomes. An ESAS score of 4 was used as a cutoff for calculating the OR for symptoms predicting the recommendation of integrative interventions based on patients' self-reported symptom burdens.

Results

- Our study population consisted of 473 patients. Seventy-one percent of the patients were women; 42% had breast cancer, the most common diagnosis; and 31% had metastatic disease. More than half of the patients, 247 out of 471 (52%), identified symptom management as their primary concern, with pain being the most prevalent symptom, reported by 72 out of the 247 (29%). After the IO consultations, the highest likelihood of subsequent recommendations was acupuncture for hot flashes (odds ratio [OR] = 23.14, P = 0.002) or peripheral neuropathy (OR = 6.59, P < 0.001), oncology massage for pain (OR = 3.04, P < 0.001), psychology referral for patient's self-reported anxiety (OR = 2.35, P < 0.001), and mind-body therapies for stress (OR = 2.57, P < 0.001).

Patients' primary concern for seeking an integrative oncology consultation (MYCaW1) (%). N = 471 (2 patients did not respond to the question)



Reasons for Provider Referral to Ambulatory Integrative Oncology Consultation and Percentage of Patients whose Concerns Aligned to the Referral Reason.

Reason for referral	Patients referred N (%) (N=473) ^a	Patients with concern matching referral N (%) ^b
Integrative approach	270 (57)	69 (26)
Diet	124 (26)	55 (44)
Pain	88 (19)	69 (78)
Herbs and supplements	86 (18)	24 (28)
Stress	86 (18)	50 (58)
Overall health	72 (15)	38 (53)
Sleep	50 (11)	29 (57)
Neuropathy	50 (11)	41 (82)
Fatigue	54 (11)	32 (59)
Exercise	46 (10)	20 (43)
Relaxation	30 (9)	10 (33)
Dry mouth	24 (5)	16 (67)
Weight management	22 (5)	0 (0)
Nausea	20 (4)	12 (60)
Hot flashes	21 (4)	12 (57)
Depression	19 (4)	15 (79)
Appetite	13 (3)	7 (54)

^aThe sum of n is greater than the number of patients as there was often more than one reason for referral for each patient.

^bThe percentage given is the number of patients citing the concern among all patients referred for that particular concern from the previous column.

Symptoms Predicting the Recommendations of Integrative Interventions Based on Referral Reason and Patient's Self-Reported Symptom Burden

Integrative interventions	Initial IO referral reason		Symptom scores (ESAS ≥4)	
	Odds ratio (95% CI)	P value	Odds ratio (95% CI)	P value
Acupuncture				
Fatigue	0.54 (0.30-0.97)	0.039	1.71 (1.18-2.49)	0.005
Nausea	2.57 (0.97-6.81)	0.057	1.86 (1.14-3.04)	0.013
Neuropathy	6.59 (3.02-14.38)	<0.001	2.25 (1.52-3.31)	<0.001
Hot flashes	23.14 (3.08-173.91)	0.002	2.08 (1.39-3.11)	<0.001
Pain	4.15 (2.46-6.99)	<0.001	2.17 (1.50-3.13)	<0.001
Dry mouth	5.71 (1.92-16.99)	0.002	2.07 (1.38-3.12)	<0.001
Sleep	0.94 (0.52-1.68)	0.825	1.50 (1.02-2.20)	0.039
Oncology massage				
Fatigue	0.63 (0.30-1.34)	0.230	1.17 (0.75-1.81)	0.493
Neuropathy	1.18 (0.61-2.32)	0.621	1.25 (0.8-1.95)	0.322
Stress	2.20 (1.33-3.65)	0.002	N/A	
Relaxation	2.74 (1.28-5.83)	0.009	N/A	
Pain	3.04 (1.86-4.98)	<0.001	2.14 (1.38-3.31)	0.001
Sleep	0.49 (0.22-1.13)	0.095	1.18 (0.75-1.87)	0.472
Anxiety	N/A		1.60 (1.04-2.48)	0.032
Psychology referral				
Anxiety	N/A		2.35 (1.41-3.90)	0.001
Depression	N/A		2.08 (1.24-3.48)	0.005
Fatigue	0.95 (0.43-2.11)	0.899	1.80 (1.05-3.11)	0.034
Pain	0.49 (0.22-1.05)	0.068	1.00 (0.61-1.65)	0.991
Stress	2.09 (1.18-3.70)	0.012	N/A	
Sleep	1.83 (0.91-3.68)	0.093	1.54 (0.88-2.70)	0.131
Nausea	0.97 (0.28-3.39)	0.960	1.96 (1.09-3.54)	0.025
Mind-body therapies				
Anxiety	N/A		2.13 (1.47-3.09)	<0.001
Depression	2.48 (0.93-6.65)	0.070	1.54 (1.03-2.30)	0.034
Stress/anxiety	2.57 (1.58-4.20)	<0.001	N/A	
Fatigue	0.80 (0.45-1.42)	0.447	0.87 (0.61-1.26)	0.475
Pain	0.50 (0.31-0.80)	0.004	0.65 (0.45-0.93)	0.020
Sleep	0.90 (0.50-1.61)	0.720	0.89 (0.61-1.30)	0.553
Nausea	0.90 (0.37-2.22)	0.821	1.13 (0.70-1.83)	0.619

Abbreviations: ESAS, Edmonton Symptom Assessment System; IO, integrative oncology

Limitations

- It was a retrospective study at a large comprehensive cancer center. Therefore, our results may not be generalizable to IO practices across the globe, especially in community oncology settings.
- We did not report on how availability or lack of insurance coverage may have influenced patient choice in pursuing treatments such as oncology massage or acupuncture or how a lack of health insurance coverage may limit access to IO services.

Conclusions and future directions:

Cancer patients are seeking for integrative therapies into their symptom management care plan. Various integrative therapies can be safely integrated into patients' oncologic care. Acupuncture recommendation was predicted by a referral for hot flashes and neuropathy or patient self-reported significant fatigue, nausea, neuropathy, hot flashes, pain, or dry mouth. Oncology massage was predicted by a referral for pain and stress or patient-reported symptoms of anxiety and pain. Mind-body therapies were recommended for patients with pain. Future longitudinal research should focus on examining cancer patient's symptom response to integrative therapies.

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