Does Age Affect What Patients Value When Considering Lung Cancer Treatments? Evidence from a National Survey

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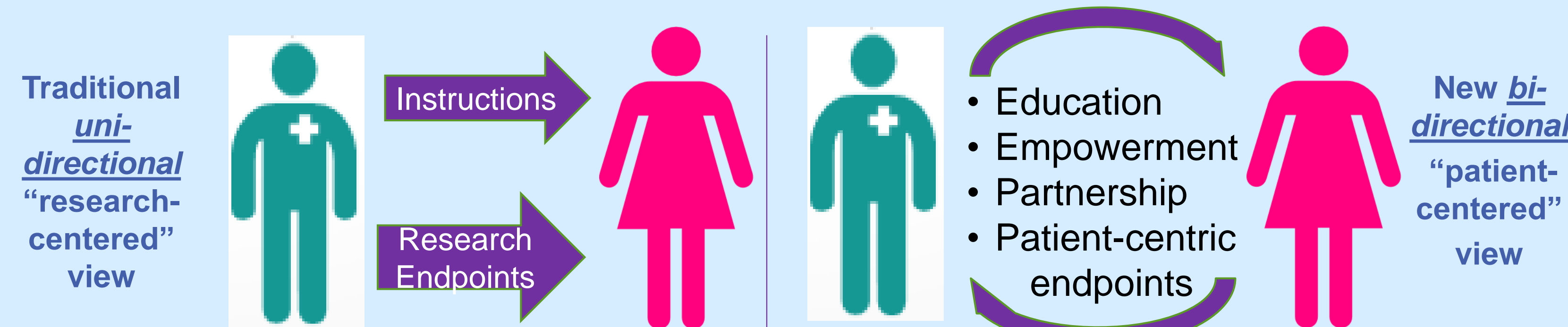
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Project Transform – a multi-year, multi-stakeholder project – aims to integrate the patient experience into lung cancer treatment, research, and policy. *Project Transform's vision is to ensure that the preferences of patients with lung cancer are recognized, their needs are valued, and that living well with lung cancer can be the norm.*

Objective

- Lung cancer is the leading cause of cancer mortality in the US [1].

- Few studies have explored how values vary with patients' lung cancer treatment experience.

- Due to the rapidly increasing number of treatments for lung cancer, we sought to demonstrate a simple values elicitation method and explore how values differ across age.

Methods

Traditional *uni-directional* "research-centered" view → Instructions / Research Endpoints → • Education • Empowerment • Partnership • Patient-centric endpoints → New *bi-directional* "patient-centered" view

- The values of patients and caregivers with lung cancer inclusive of all stages were explored using a simple values elicitation exercise developed in partnership with diverse stakeholder advisory boards.

- Data came from a national survey completed in partnership with LUNGevity and other collaborators (Patient Advocate Foundation, Cancer Support Community, and Edge Research)

- Respondents were presented with five treatment characteristics, including progression free survival (PFS), short-term side effects (ST-SE), long-term side effects (LT-SE), risk of late-onset side effects (LO-SE), and mode of administration.

- Values were elicited using a simple three-point Likert scale: not important, somewhat important, and very important, which were scored as 0, 5, and 10 respectively; compared using two sample t-tests.

Results

Table 1 – Demographics

		Total sample (n = 783)
Respondent type	**Patient – N (%)**	**555 (71%)**
	Caregiver*– N (%)	**228 (29%)**
Respondent Age	**Mean (SD)**	**54.8 (15.0)**
Patients	**≥60y**	**281 (51%)**
Caregivers	**≥60y**	**60 (26%)**
Sex	**Female – N (%)**	**555 (71%)**
Race	**White – N (%)**	**593 (76%)**
Patient Lung Cancer Type	**Non-small cell**	**609 (78%)**
	Small Cell	**83 (10%)**
	Other/Don't know	**91 (12%)**
Patient Treatment received	**Chemotherapy**	**513 (66%)**
	Radiation	**424 (54%)**
	Targeted Therapy	**234 (30%)**
Years since diagnosis	**Median (IQR)**	**4 (2-7)**

*caregivers responded for the patient they were a caregiver for

Table 2 – Attributes and levels

Attribute	PFS	Short-term side effects	Long-term side effects	Risk of late-onset side effects	Mode of administration
Levels	6 months	Mild	None	10%	Pills taken daily at anytime
	12 months	Moderate	Mild	20%	Pills taken daily without food
	18 months	Severe	Moderate	30%	Infusion every 3 weeks

Major Findings

- PFS was the most important attribute for respondents but was underestimated by caregivers compared to patients [mean score MS(SD): 8.1 (2.9) v 8.6 (2.7), P=0.017].

- Caregivers overvalued the importance of ST-SE [MS (SD): 7.0 (3.3) v 6.1 (3.5), P<0.001], LT-SE (MS (SD): 8.4 (2.7) v 7.6 (3.1), P=0.001], and mode of administration [MS (SD): 6.9 (3.4) v 6.1 (3.7), P=0.008].

- Caregivers and patients did not differ on importance of LO-SE [MS (SD): 7.5 (2.9) v 7.0 (3.1), P=0.052]

- Among just patients, PFS was the most important attribute and valued similarly between younger vs. older patients [MS (SD): 8.7 (2.6) v 8.5 (2.8), P=0.56].

- However, ST-SE [MS: 6.4 (3.1) v 5.7 (3.7), P=0.024] and LT-SE [MS (SD): 8.0 (2.9) v 7.3 (3.2), P = 0.018] were more important among patients<60y vs. ≥60y, respectively.

Conclusions

- **Among patients with lung cancer, PFS was highly valued regardless of patient age.**

- **Older patients value short term and long term side effects differently as compared to younger patients**

[1] U.S. National Institutes of Health. National Cancer Institute. SEER Cancer Statistics Review, 1975-2012. 2015. [2] Bridges JF, Janssen EM, Ferris A, Dy SM. Project Transform: incorporating the patient experience into lung cancer treatment, research, and policy. *Working Paper*