The Impact of Palliative Care and Hospice Services in the Care of Patients with Advanced Stage Non-Small Cell Lung Cancer

Richard C. Stephenson, MD
Hospice & Palliative CareCenter
Amy H. Hughes
Forsyth Regional Cancer Center
Kristy Tayapongsak, MSII
Wake Forest School of Medicine

Overview

- Background & Literature Review
- Study Sample & Methods
- Our Findings: How do we measure up?
- Conclusions: Maximizing Strengths, Minimizing Weaknesses
- Next Steps – Research & Clinic

Introduction

- Lung Cancer
  - 2nd most common cancer diagnosis
  - Leading cause of cancer-related deaths
- Non-Small Cell Lung Cancer (NSCLC)
  - Most common type
  - Often initially presents with distant metastases → Stage IV
  - "Incurable" - opens the door for palliative care soon after diagnosis

Literature Review

The Palliative Care Tree

Palliative Care Consult:

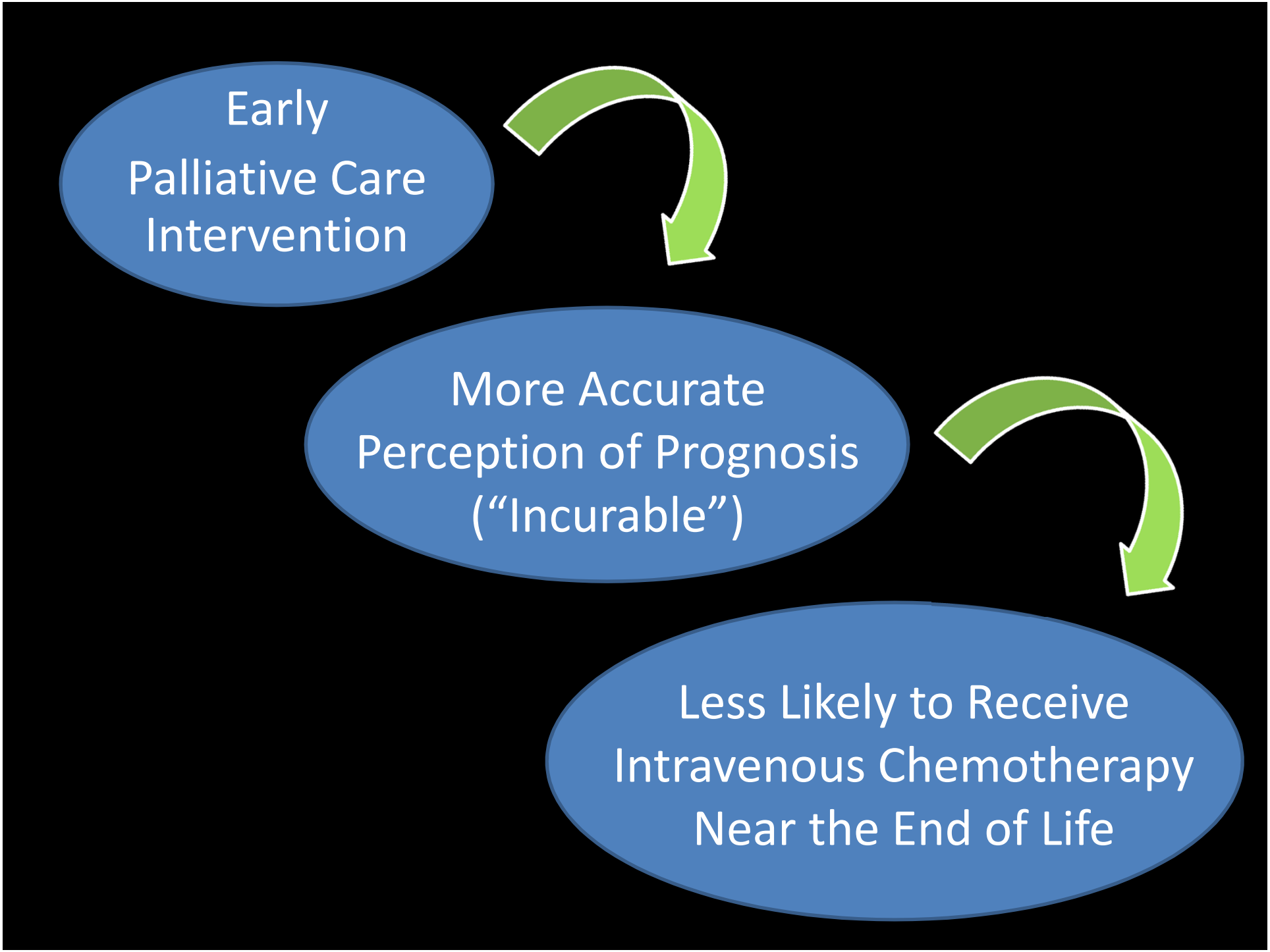
1. Patient education
2. Symptom management
3. Coping with terminal illness
4. Treatment decision-making
5. Future appointments and referrals

Effects of Early Palliative Care

Temel JS, Greer JA, Admane S, et al. Longitudinal perceptions of prognosis and goals of therapy in patients with metastatic non-small-cell lung cancer: results of a randomized study of early palliative care. J. Clin Oncol. 29(17): 2319-2325, 2011.

- 151 metastatic NSCLC patients
- 1/3 of patients reported that their cancer was curable
- Majority of patients endorsed "getting rid of all the cancer" as a goal of therapy

Realistic understanding of prognosis is crucial to medical decision making!


Early
Palliative Care
Intervention
More Accurate
Perception of Prognosis
("Incurable")
Less Likely to Receive
Intravenous Chemotherapy
Near the End of Life

The value of chemo in this diagnosis?

Brown J, Thorpe H, Napp V, et al. Assessment of quality of life in the supportive care setting of the Big Lung Trial in non-small-cell lung cancer. J. Clin Oncol. 23: 7417-7427, 2005

- 273 patients
- No chemo vs. chemo
- Chemo only gave modest gains in survival
- Chemo did NOT negatively impact global quality of life, physical/emotional functioning, fatigue, dypsnea, or pain in cancer patients
- Chemo CAN play a palliative role, but not a curative one

"There is no longer a basis for failure to offer chemotherapy to patients in the supportive care setting."

Effects of Early Palliative Care

Greer JA, Pirl WF, Jackson VA, et al. Effect of early palliative care on chemotherapy use and end-of-life care in patients with metastatic non-small-cell lung cancer. J. Clin Oncol. 30: 394-400, 2011.

- 151 metastatic NSCLC patients
- Early palliative care intervention vs. standard care alone
- Both groups received similar numbers of chemotherapy regimens BUT…

– Optimized timing of final chemotherapy administration

- Longer treatment-free interval between last infusion dose and death

– Earlier transition to hospice services

Effects of Early Palliative Care

Temel JS, Greer JA, Muzikansky A, et al. Early palliative care for patients with metastatic non-small-cell lung cancer. N Engl J Med. 363: 733-742, 2010.

- 107 patients diagnosed with metastatic NSCLC between 2006-2009
- Palliative care + standard care vs. standard care alone
- "survival prolonged by 2 months"
- "clinically meaningful improvements in quality of life and mood"

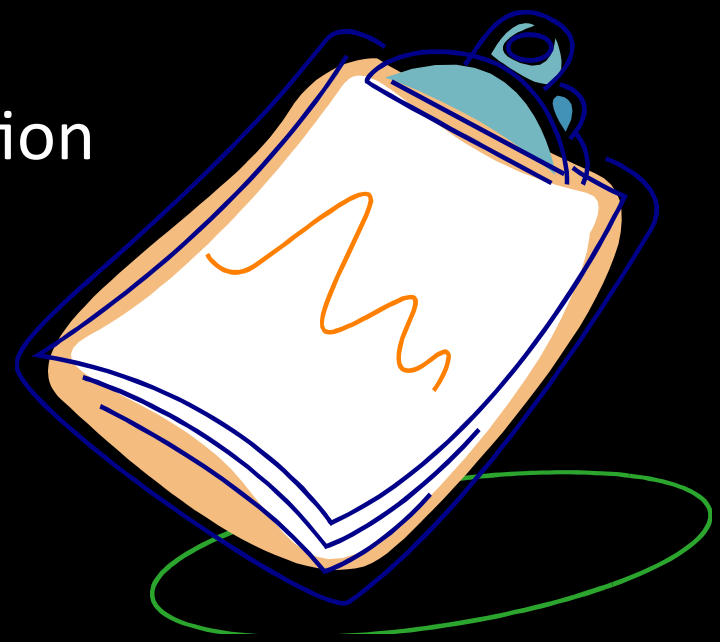
An economic benefit, too!

"Given the trends toward aggressive and costly care near the end of life among patients with cancer, timely introduction of palliative care may serve to mitigate unnecessary and burdensome personal and societal costs."

- Temel et al., 2010

Literature Review: Early Palliative Care

- Incorporation of palliative care *ALONGSIDE* standard oncological care for NSCLC patients
  - ↑ median survival
  - ↑ quality of life
  - ↑ accuracy of illness perception
  - ↓ aggressive treatment at end of life
  - ↓ depressive symptoms



Literature Review: Hospice services

Saito AM, Landrum MB, Neville BA, et al. Hospice care and survival among elderly patients with lung cancer. J Palliat Med. 14(8): 929-938, 2011.

- Retrospective study of 7879 advanced NSCLC lung cancer patients
- Hospice patients had a longer survival than non-hospice patients!
  - Statistically significant for long-term hospice patients

"Concern about hastening death should not be a barrier to hospice care."

And yet…

Temel JS, McCannon J, Greer JA, et al. Aggressiveness of care in a prospective cohort of patients with advanced NSCLC. Cancer. 113(4): 826-833, 2008.

Study provides baseline data describing care for advanced stage NSCLC patients:

- increasingly aggressive treatment towards the end of life
  - high rates of chemotherapy usage near EOL
  - high rates hospital admissions near EOL
- ↑ percentage of patients referred to hospice before death, but ↓ length of stay in hospice

"… the current climate of oncology care for patients with late-stage lung cancer is arguably an aggressive one."

Where the "hospice" stigma is coming from…

Earle CC, Landrum MB, Souza JM, et al. Aggressiveness of cancer care near the end of life: is it a quality-of-care issue? J. Clin Oncol. 26(23): 3860-3866, 2008.

This pattern of <u>increased overall use</u> of hospice, but <u>decreased length of stay</u>.

"… patients are simply being admitted to hospice to manage death, rather than obtaining the benefits of symptom management and palliative support that hospice can provide."

More to this life…

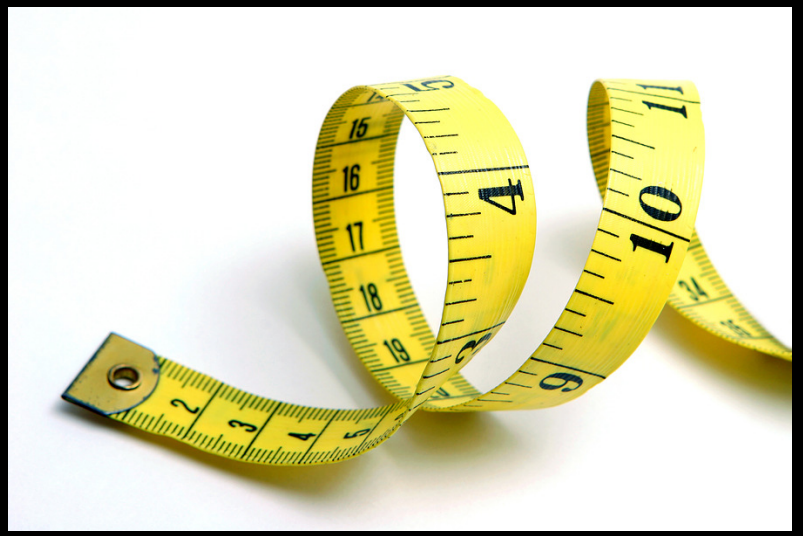
- Emerging key measure of excellence in cancer care: <u>quality of end of life</u>
- surveys of patients, families, and clinicians → "affirming the value of not simply prolonging life but also enhancing the dying process"

Temel et al., 2008

So how do we measure up?

Research Aims:

1. Profile the continuum of care for advanced stage NSCLC patients.
2. Compare our findings to national benchmarks.



Study Sample

- 119 deceased stage IV NSCLC patients
- Diagnosed at Forsyth Regional Cancer Center (FRCC)
- 2008, 2009, 2010
- Reside in Forsyth Co.

Methods

- Retrospective Chart Review
  - ✓ antitumor treatment services
    - ✓ post-diagnosis hospital, ED, ICU admissions
      - ✓ palliative care consultations
        - ✓ hospice referrals & enrollments
          - ✓ circumstances surrounding death
- Electronic Medical Records
  - Forsyth Medical Center (FMC)
    - Rad Onc
    - Med Onc
    - Acute Palliative Care Unit
  - HPCC

Methods

- National Benchmarks – from QOPI and published studies

	Natl Benchmarks (<%)
>1 emergency room visit in the last month of life[3]	4.00%
>1 hospitalization in the last month of life[3]	4.00%
Admission to ICU in last month of life[3]	4.00%
Proportion starting a new chemotherapy regimen in the last 30 days of life[3]	2.00%
Proportion receiving chemotherapy in the last 14 days of life[1]	11.63%
Lack of hospice enrollment[1]	43.00%
Admission to hospice <3 days before death[1]	15.00%
Admission to hospice <7 days before death[1]	29.00%
Death in an acute care hospital[2]	25.80%

1 – Quality Oncology Practice Initiative Aggregate Data from Spring 2012
2 – Greer et al., 2011
3 – Earle et al., 2005

Results

- Median survival: 125 days (4.1 months)
  - Range: 3 days – 3.2 years
- 81.5% received antitumor treatment – RT, Chemo, or Both
  - 14 out of 119 patients (11.76%) received extensive chemotherapy (3, 4, or 5 lines of chemo)

0/1/2 Lines of Chemo

- Median Age: 71 y/o
- Race
  - Black: 16.35%
  - White: 83.65%

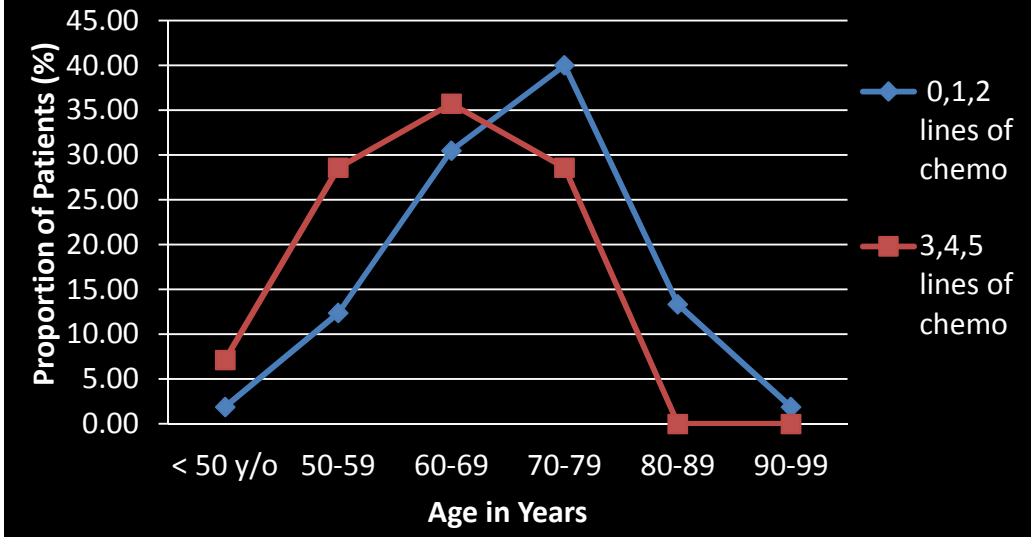
3/4/5 Lines of Chemo

- Median Age: 62 y/o
- Race
  - Black: 28.57%
  - White: 71.43%

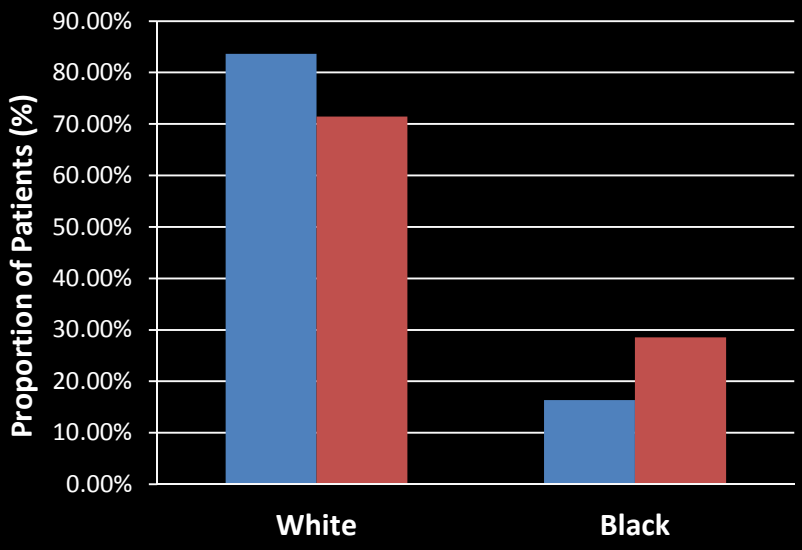
Younger patients received more extensive chemo treatment.

Twice as many black patients received extensive chemo treatment.

Lines of Chemo: By Age



Lines of Chemo: By Race

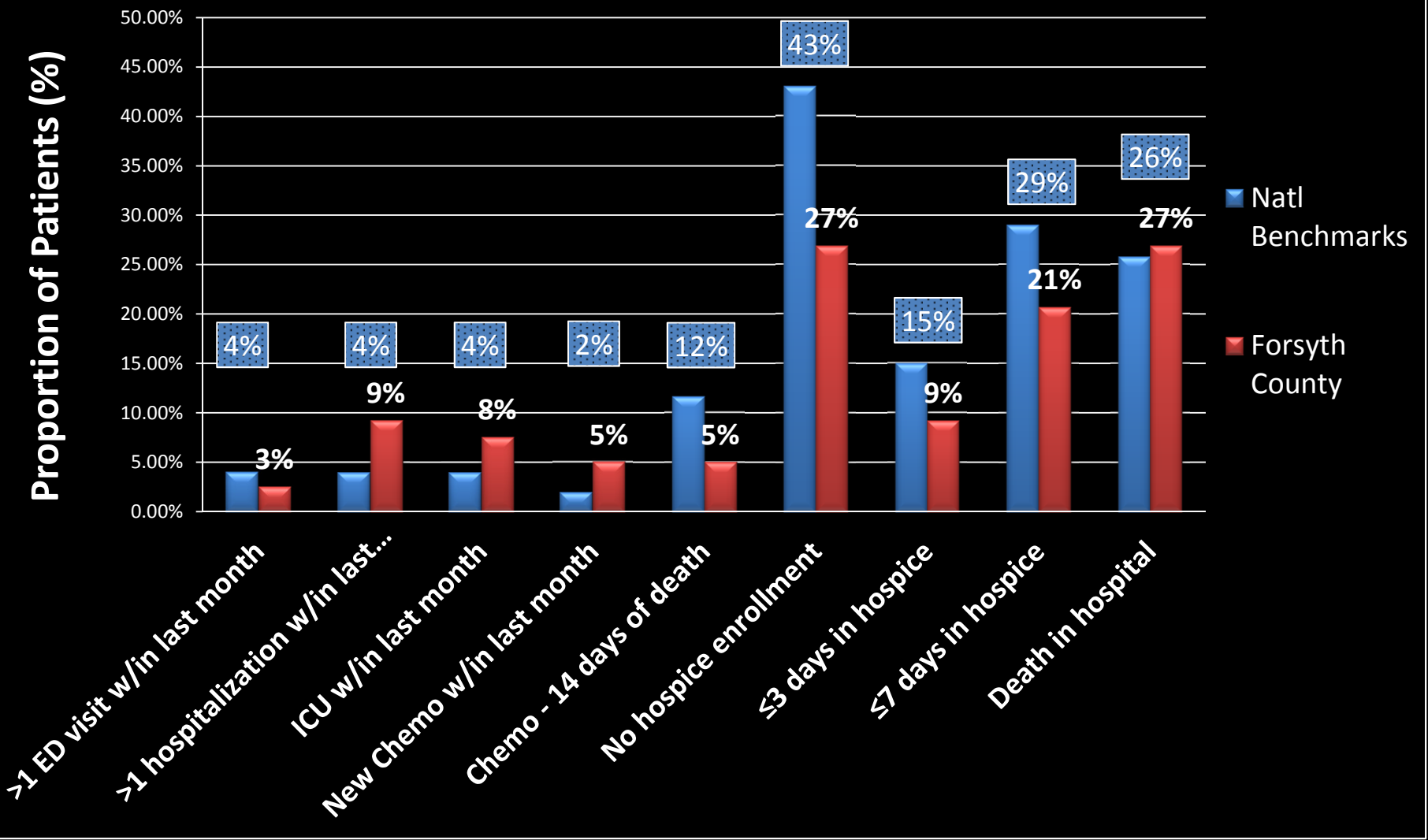


On track with the literature…

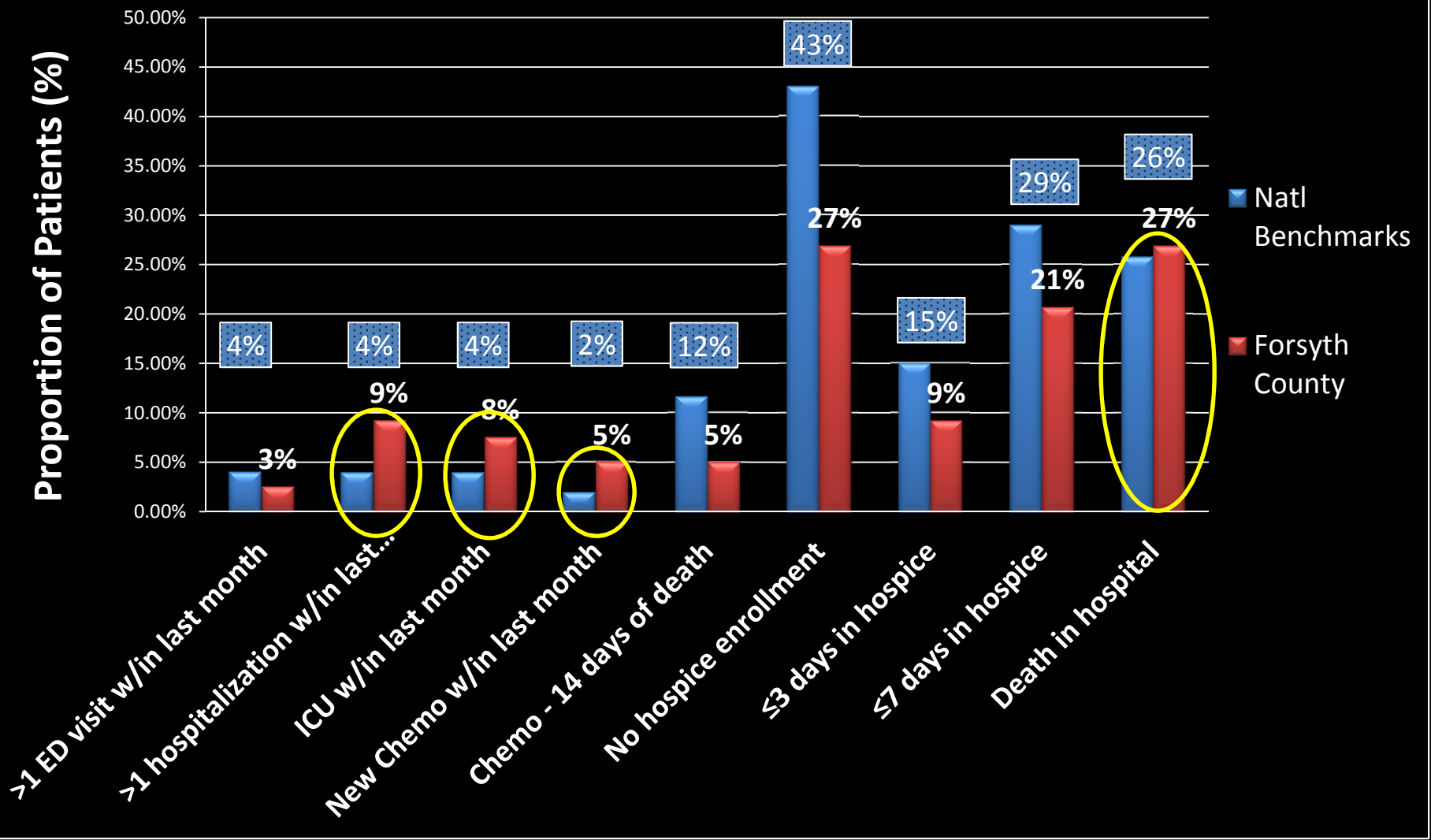
Miesfeldt S, Murray K, Lucas L, et al. Association of age, gender, and race with intensity of end-of-life care for Medicare beneficiaries with cancer. J of Palliative Medicine. 15(5), 2012.

- Utilized similar benchmarks to define "aggressive management"
  - less chemotherapy use at EOL
  - less late-life acute care
  - greater use of hospice services
- Less likely to receive aggressive management if:
  - Older (≥ 75 y/o)
  - Female
  - Nonblack

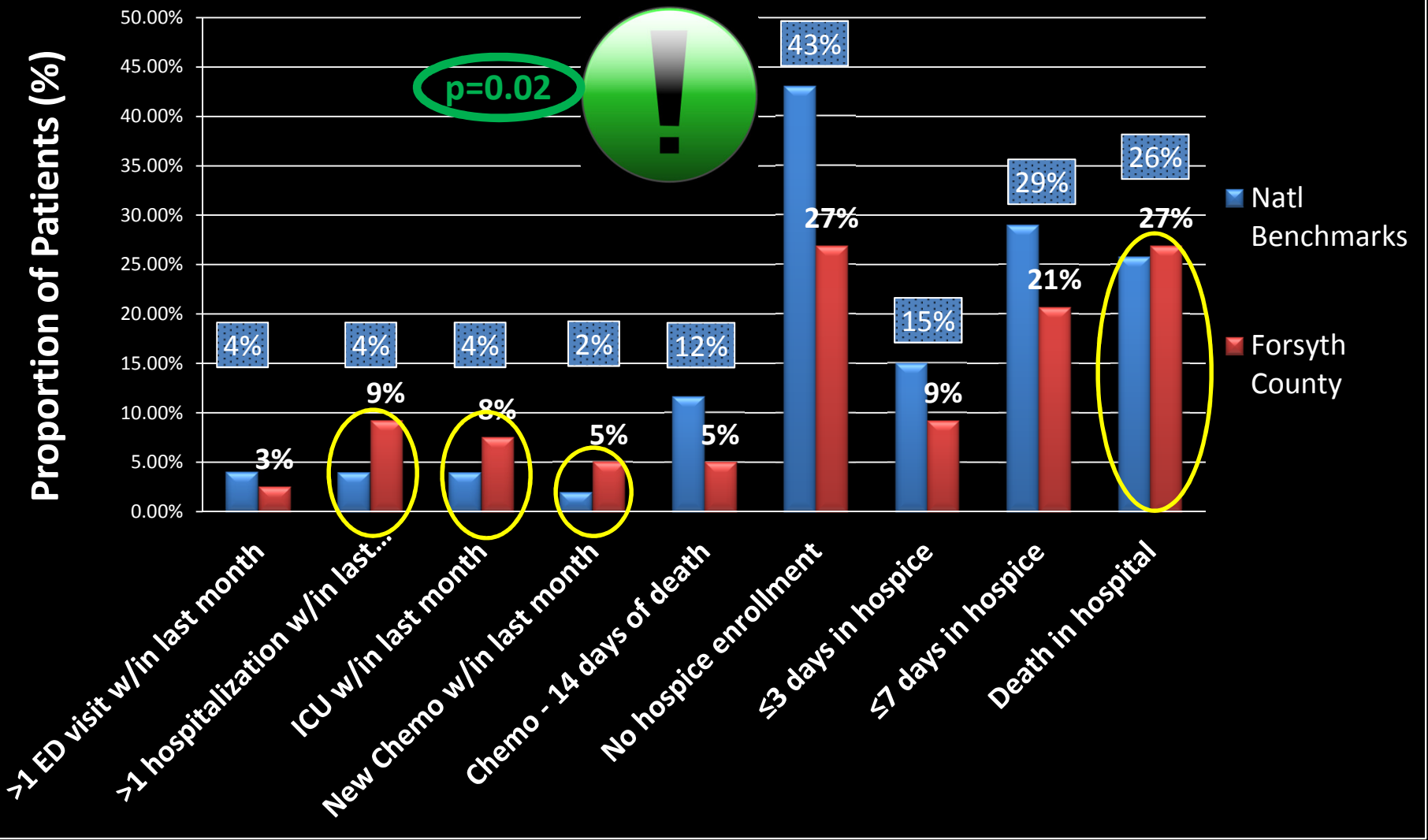
EOL Cancer Care Measures: National Benchmarks vs. Forsyth Co.



EOL Cancer Care Measures: National Benchmarks vs. Forsyth Co.



EOL Cancer Care Measures: National Benchmarks vs. Forsyth Co.



Results

- 28% received palliative care consult
  - Early palliative care consultation – 1 patient
- 79% received hospice referral
  - 73% enrolled into hospice services
  - Median length of stay: 23 days
    (compared to 9.3 days)

Patient Variables: Non-Hospice vs. Hospice Patients

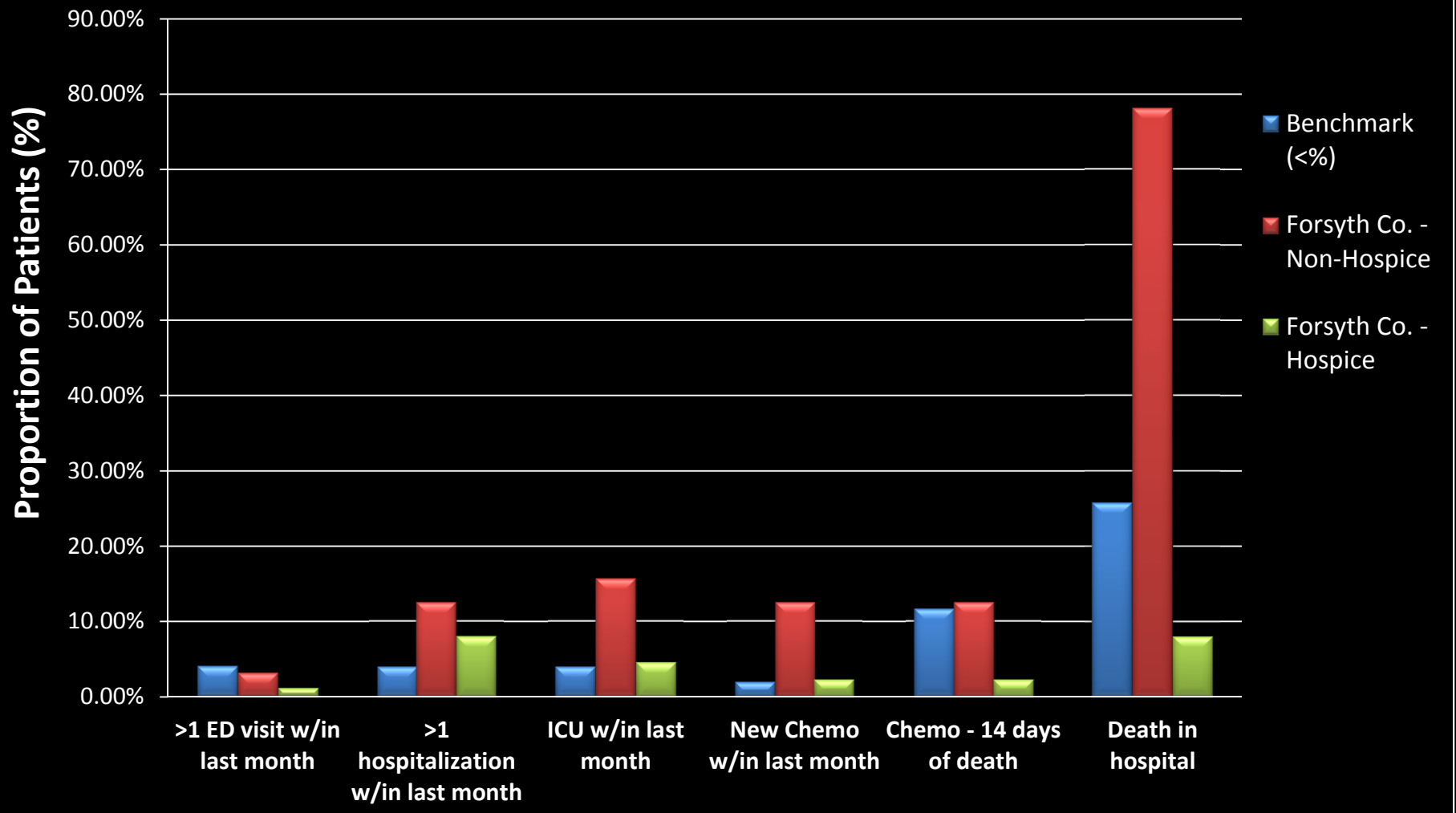
Non-Hospice Patients (n=32)

- Mean Age: 68 y/o
- Race
  - Black: 15.63%
  - White: 84.38%

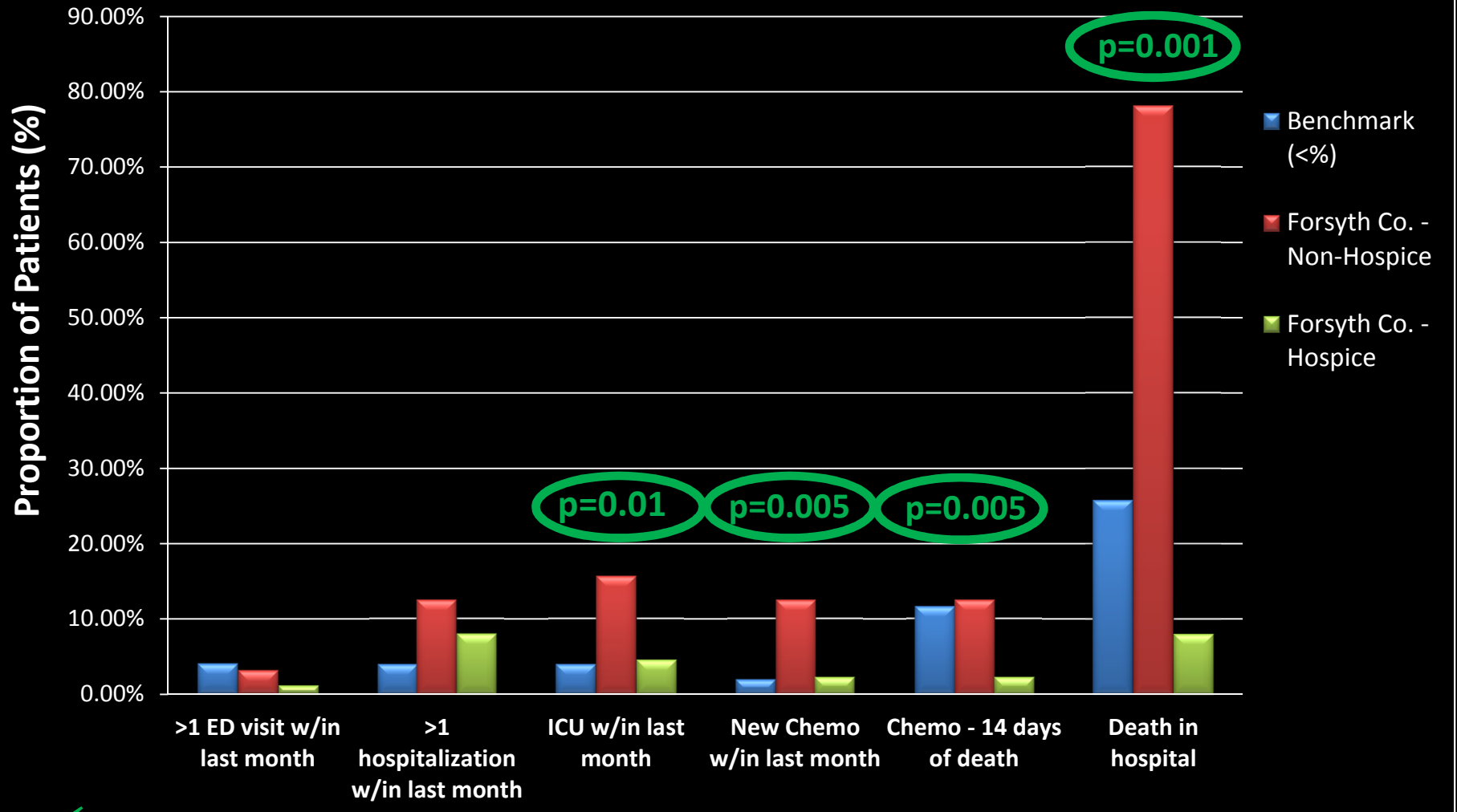
Hospice Patients (n=87)

- Mean Age: 69 y/o
- Race
  - Black: 18.60%
  - White 81.40%

EOL Cancer Care Measures: Non-Hospice vs. Hospice Patients



EOL Cancer Care Measures: Non-Hospice vs. Hospice Patients



✓ **Hospice patients did better than non-hospice patients across all measures!**

Location of Death: Non-Hospice vs. Hospice Patients

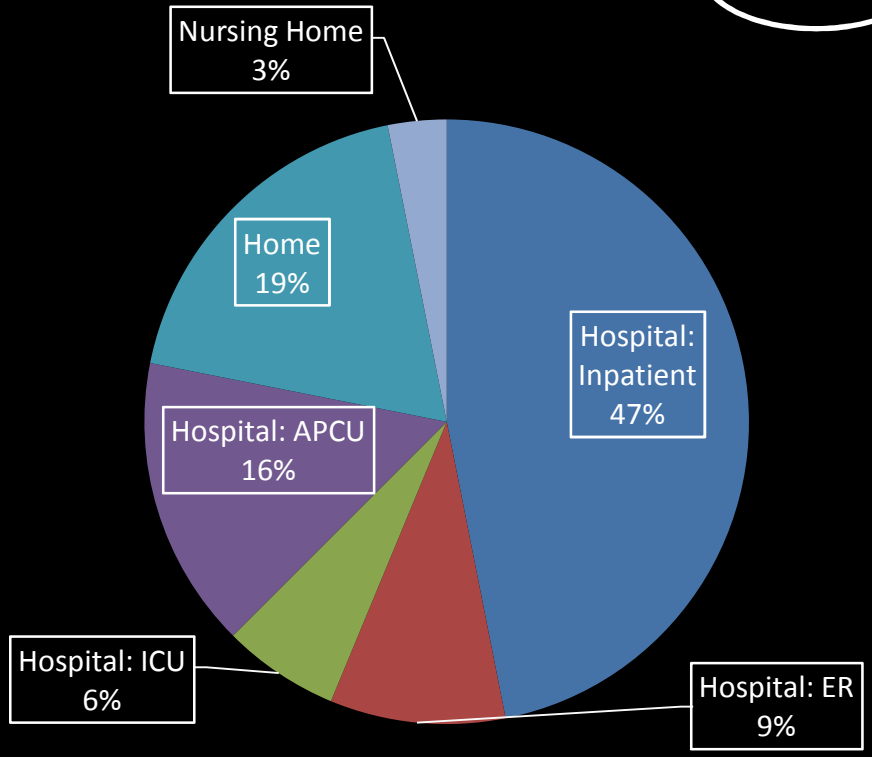
Non-Hospice Patients

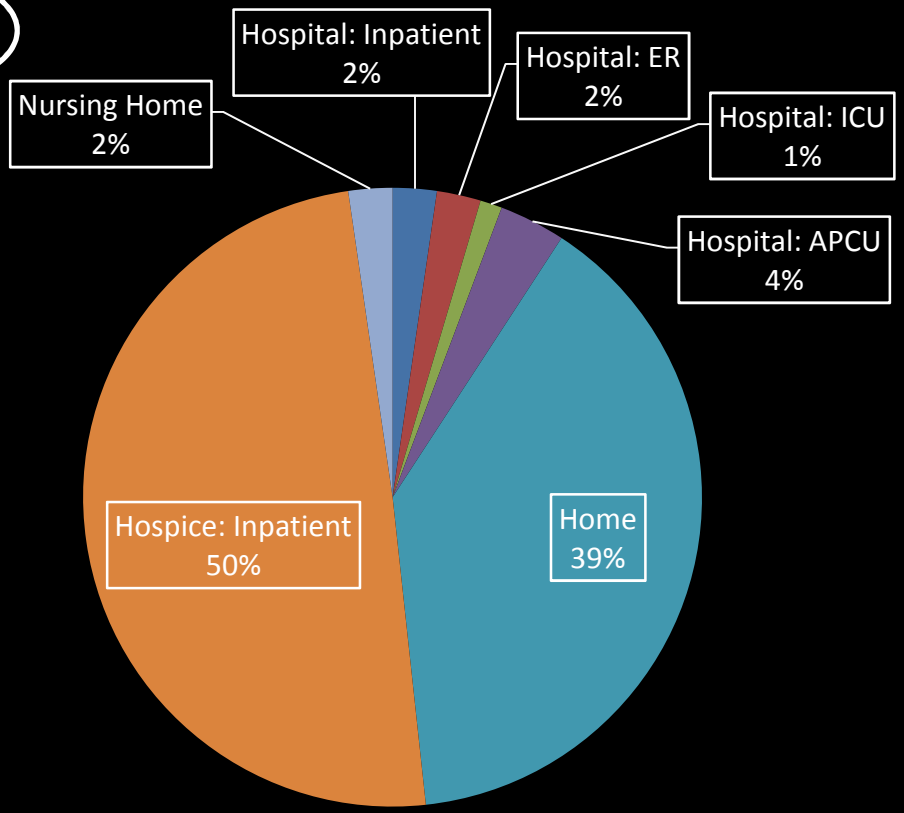
- Acute care hospital: 78.13%

Hospice Patients

- Acute care hospital: 8.05%

p=0.001





Median Survival

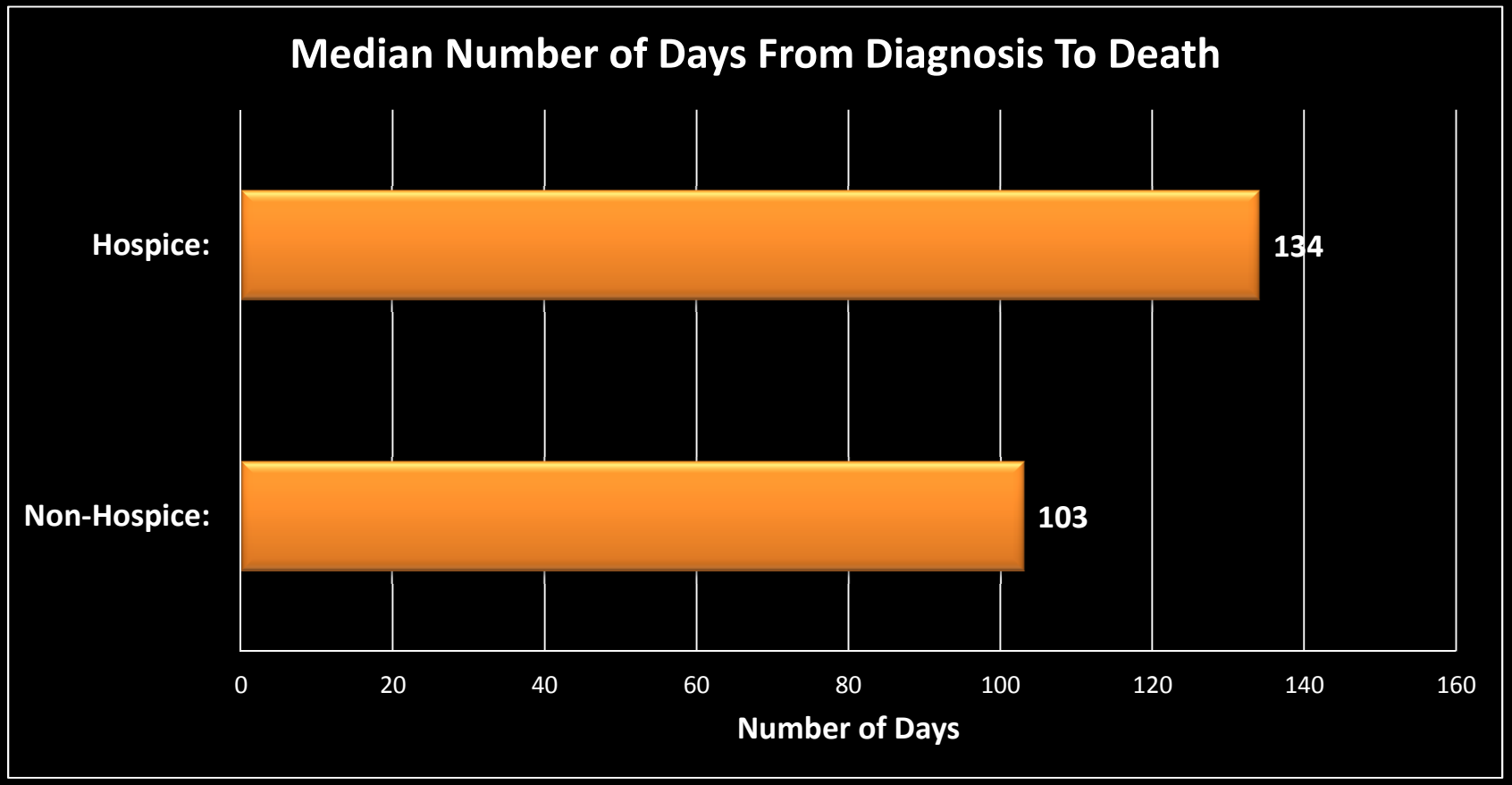
Non-Hospice Patients (n=32)

- Median survival: 103 days

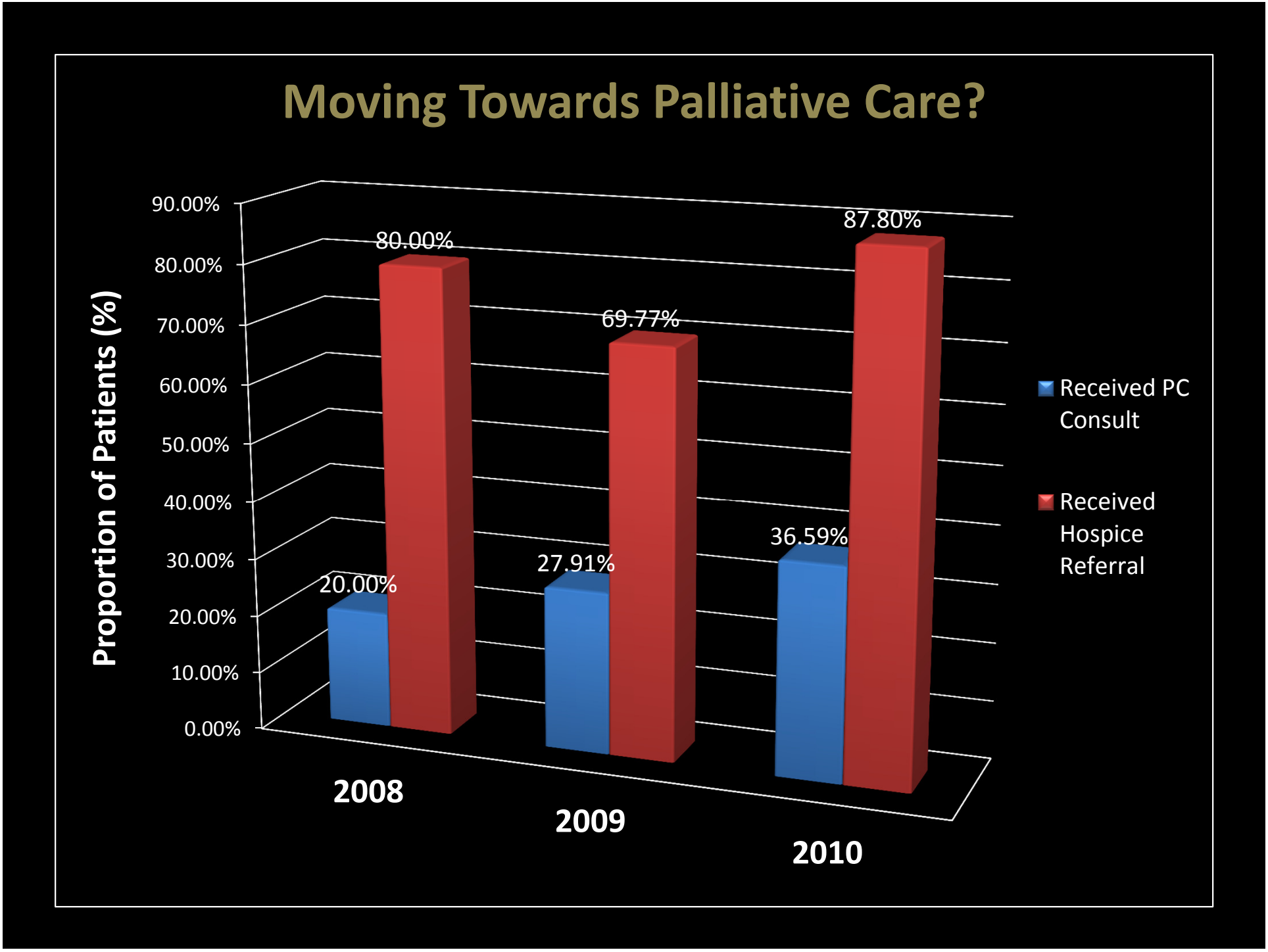
Hospice Patients (n=87)

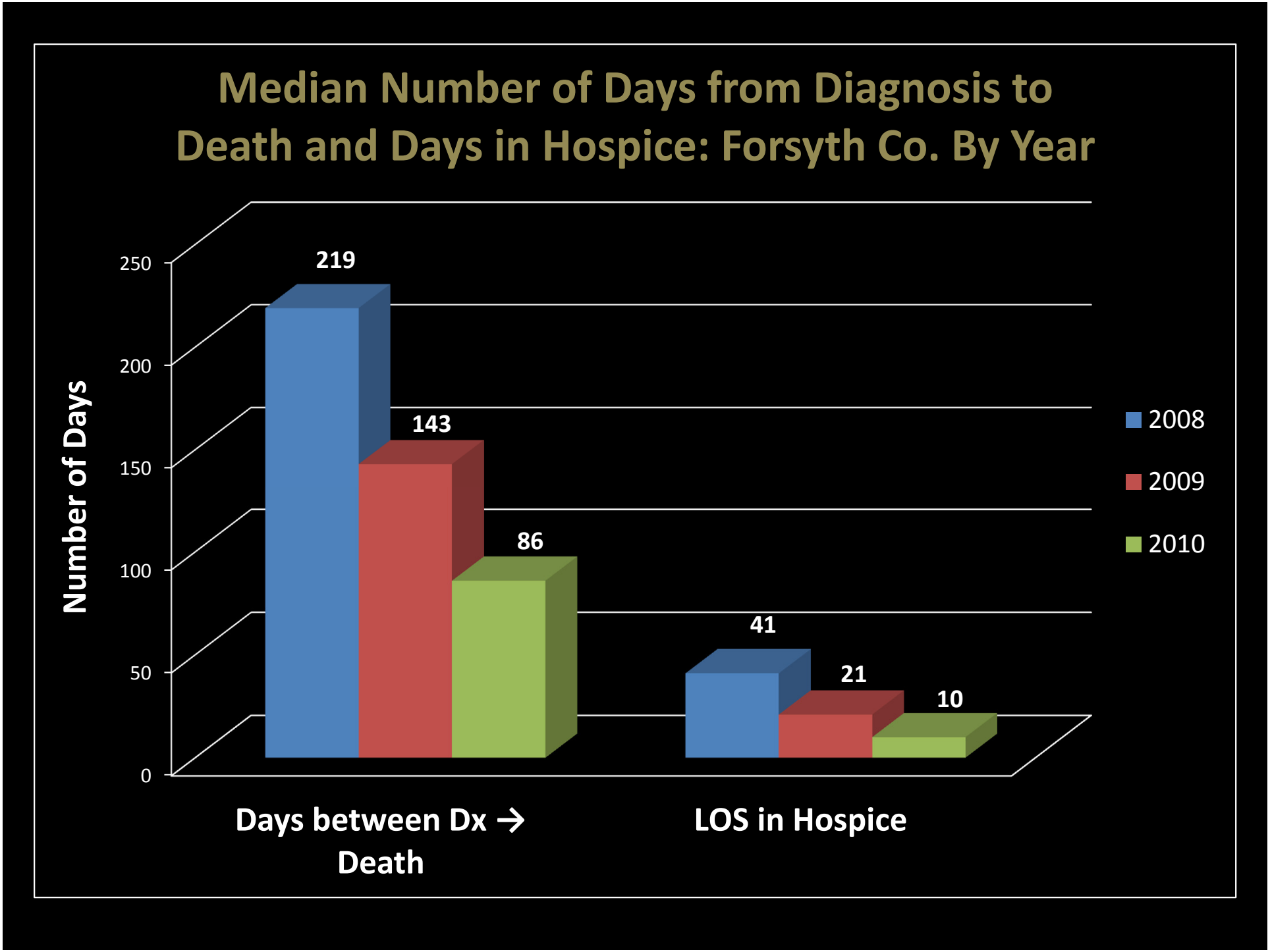
- Median survival: 134 days

p = 0.06 (**ALMOST!**)



What about trends over time?


Moving Towards Palliative Care?
Proportion of Patients (%)
90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
80.00%
69.77%
87.80%
20.00%
27.91%
36.59%
2008
2009
2010
Received PC Consult
Received Hospice Referral


Median Number of Days from Diagnosis to Death and Days in Hospice: Forsyth Co. By Year
Number of Days
250
200
150
100
50
0
219
143
86
41
21
10
2008
2009
2010
Days between Dx → Death
LOS in Hospice

Conclusions

We're doing well! But there's always room for improvement!

- ✓ Oncological Treatment at End of Life
- ✗ Early Use of Palliative Care Consultation
- ✓ ✗ Hospice Services
  - ✓ Referrals & Enrollment
  - ✗ Length of Stay

Next Steps

- Research
  - Repeat study at the Comprehensive Cancer Center at Wake Forest Baptist Health
    - Academic hospital vs. community hospital?

"Patients who seek care in an academic medical setting with active research programs may be more likely to receive aggressive care…"

- Temel et al., 2008

Next Steps

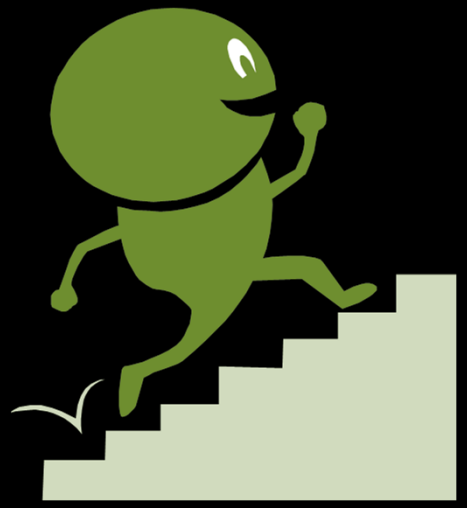
- Clinic

"Patients may have received late referrals to hospice because they were already receiving sufficient EOL support through palliative care intervention. Perhaps outpatient palliative services may be a solution to bridge critical gaps in care…"

-Temel et al., 2008

And that's exactly what we're doing!

– Outpatient Palliative Care Consultation Program currently in the works at FRCC
– Earlier referrals to HPCC
  - Not just a "last resort"



References

1. Brown J, Thorpe H, Napp V, et al. Assessment of quality of life in the supportive care setting of the Big Lung Trial in non-small-cell lung cancer. J. Clin Oncol. 23: 7417-7427, 2005.

2. Earle CC, Landrum MB, Souza JM, et al. Aggressiveness of cancer care near the end of life: is it a quality-of-care issue? J. Clin Oncol. 26(23): 3860-3866, 2008.

3. Earle CC, Neville BA, Landrum MB, et al. Evaluating claims-based indicators of the intensity of end-of-life cancer care. International Journal for Quality in Health Care. 17(6):505-509, 2005.

4. Greer JA, Pirl WF, Jackson VA, et al. Effect of early palliative care on chemotherapy use and end-of-life care in patients with metastatic non-small-cell lung cancer. J. Clin Oncol. 30: 394-400, 2011.

5. Miesfeldt S, Murray K, Lucas L, et al. Association of age, gender, and race with intensity of end-of-life care for Medicare beneficiaries with cancer. J of Palliative Medicine. 15(5), 2012.

6. Podnos YD, Borneman TR, Koczywas M, et al. Symptom concerns and resource utilization in patients with lung cancer. J Palliat Med. 10(4): 899-903, 2007.

7. Quality Oncology Practice Initiative Aggregate Data from Spring 2012.

References

8. Quill, TE. Is length of stay on hospice a critical quality of care indicator? J Palliat Med. 10(2): 290-291, 2007.

9. Saito AM, Landrum MB, Neville BA, et al. Hospice care and survival among elderly patients with lung cancer. J Palliat Med. 14(8): 929-938, 2011.

10. Siegel R, Naishadham D, Jemal A. Cancer statistics, 2012. CA: A Cancer Journal for Clinicians. 62: 10–29, 2012.

11. Spiro SG, Rudd RM, Souhami RL, et al. Chemotherapy versus supportive care in advanced non-small cell lung cancer: improved survival without detriment to quality of life. Thorax. 59: 828-836, 2004.

12. Temel JS, Greer JA, Admane S, et al. Longitudinal perceptions of prognosis and goals of therapy in patients with metastatic non-small-cell lung cancer: results of a randomized study of early palliative care. J. Clin Oncol. 29(17): 2319-2325, 2011.

13. Temel JS, Greer JA, Muzikansky A, et al. Early palliative care for patients with metastatic non-small-cell lung cancer. N Engl J Med. 363: 733-742, 2010.

14. Temel JS, McCannon J, Greer JA, et al. Aggressiveness of care in a prospective cohort of patients with advanced NSCLC. Cancer. 113(4): 826-833, 2008.