2026 ASCO® ANNUAL MEETING

Implementing a centralized navigator-led and AI-assisted platform to improve lung cancer screening rates and early detection: A 6-year health system analysis

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Disclosure

I have served as a scientific advisor/consultant for: AstraZeneca, BridgeBio, Daiichi Sankyo, DAVA Oncology, Fosun, Hengrui, IDEOlogy, Novocure, Regeneron and Johnson & Johnson.

I am on the speakers' bureau for AstraZeneca, MJH Life Sciences, Regeneron, Sanofi Genzyme, Daiichi Sankyo and Johnson & Johnson.

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Key Takeaway Points

1

AI-assisted lung cancer screening program can improve screening uptake and improve early-stage detection

2

Multifaceted approach combining centralized navigation and innovative screening technologies can further improve screening uptake

3

Multifaceted hub-and-spoke model can dramatically benefit cancer screening in rural areas

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Background

- Lung cancer remains the leading cause of cancer-related death.
- Low dose CT (LDCT) screening has reduced lung cancer mortality in high-risk individuals. However, the national LDCT screening uptake remains ~20%—far short of the 40% to 50% threshold likely needed for meaningful population-level mortality reduction.
- Barriers: PCP uncertainty about eligibility criteria, limited patient awareness, geographic and insurance-related access challenges, and organizational fragmentation that disconnects screening from diagnosis and treatment.



Will AI-assisted multifaceted approach help in screening uptake?

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Hypothesis

We hypothesize that a phased AI-integrated health system intervention, including:

- AI-assisted electronic health record (EHR) alerts
- Centralized navigator coordination
- Quality dashboard integration
- Radiology workflow automation
- Innovative blood-based screening

Together could achieve high, *sustainable* screening rates while improving stage at diagnosis.

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Why AI-assisted?

OSF HealthCare Hospitals

WESTERN REGION

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   Rockford, Illinois
2. OSF HealthCare
   Saint Paul Medical Center
   Mendota, Illinois

3a. OSF HealthCare
   Saint Elizabeth Medical Center
   Ottawa, Illinois

3b. OSF HealthCare
   Saint Elizabeth Medical Center
   Peru, Illinois

4. OSF HealthCare
   Saint Clare Medical Center
   Princeton, Illinois
5. OSF HealthCare
   Saint Luke Medical Center
   Kewanee, Illinois
6. OSF HealthCare
   St. Mary Medical Center
   Galesburg, Illinois
7. OSF HealthCare
   Holy Family Medical Center
   Monmouth, Illinois
8. OSF HealthCare
   Saint Anthony's Health Center
   Alton, Illinois
9. OSF HealthCare
   Saint Katharine Medical Center
   Dixon, Illinois

CENTRAL REGION

10. OSF HealthCare
    Saint Francis Medical Center
    Peoria, Illinois

    OSF HealthCare
    Children's Hospital of Illinois
    Peoria, Illinois

11. OSF HealthCare Divine Mercy
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    Peoria, Illinois

EASTERN REGION

12. OSF HealthCare St. Francis
    Hospital & Medical Group
    Escanaba, Michigan

13. OSF HealthCare
    Little Company of Mary Medical Center
    Evergreen Park, Illinois

14. OSF HealthCare Saint James –
    John W. Albrecht Medical Center
    Pontiac, Illinois

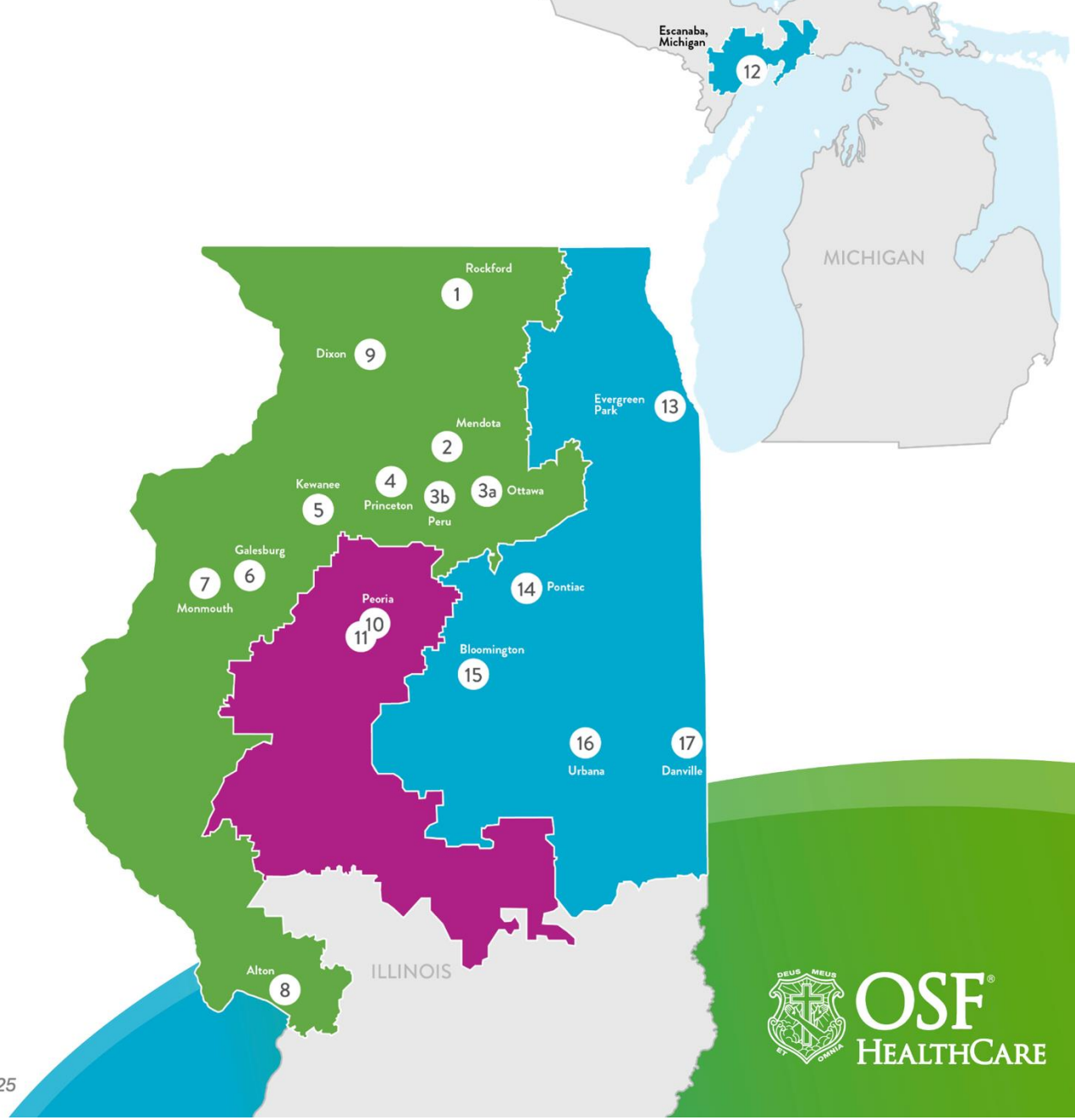
15. OSF HealthCare
    St. Joseph Medical Center
    Bloomington, Illinois

16. OSF HealthCare
    Sacred Heart Medical Center – Urbana•
    Urbana, Illinois

17. OSF HealthCare
    Sacred Heart Medical Center
    Danville, Illinois

**As of January 1,2026*

Revised 12/2025



OSF HEALTHCARE

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Interventions and implementation timeline

Component	Date	Description
Centralized navigator coordination	October 2019	Dedicated navigators consolidated into a centralized team managing screening registries, patient scheduling, and care coordination
Lung-RADS NLP automation	Mid-2021	Radloop NLP engine deployed to automate reading-based actions from radiology reports using Lung-RADS classification
AI-Assisted EHR best practice alerts	Late 2021	Automated alerts deployed system-wide to identify eligible high-risk patients during clinical visits and prompt providers to initiate screening
Updated screening guidelines	Early 2022	System-wide adoption of 2021 USPSTF expanded eligibility criteria (age 50-80y, ≥20 pack-years, current smoker or quitted in the past 15yrs)
Quality dashboard integration	Mid-2022	Screening metrics integrated into Ambulatory Quality Dashboard with real-time facility-level and provider-level performance visibility
Blood-based ctDNA screening pilot	Late 2023	DELFI FirstLook Lung test by end of FY2025, targeting noncompliant and high-risk populations

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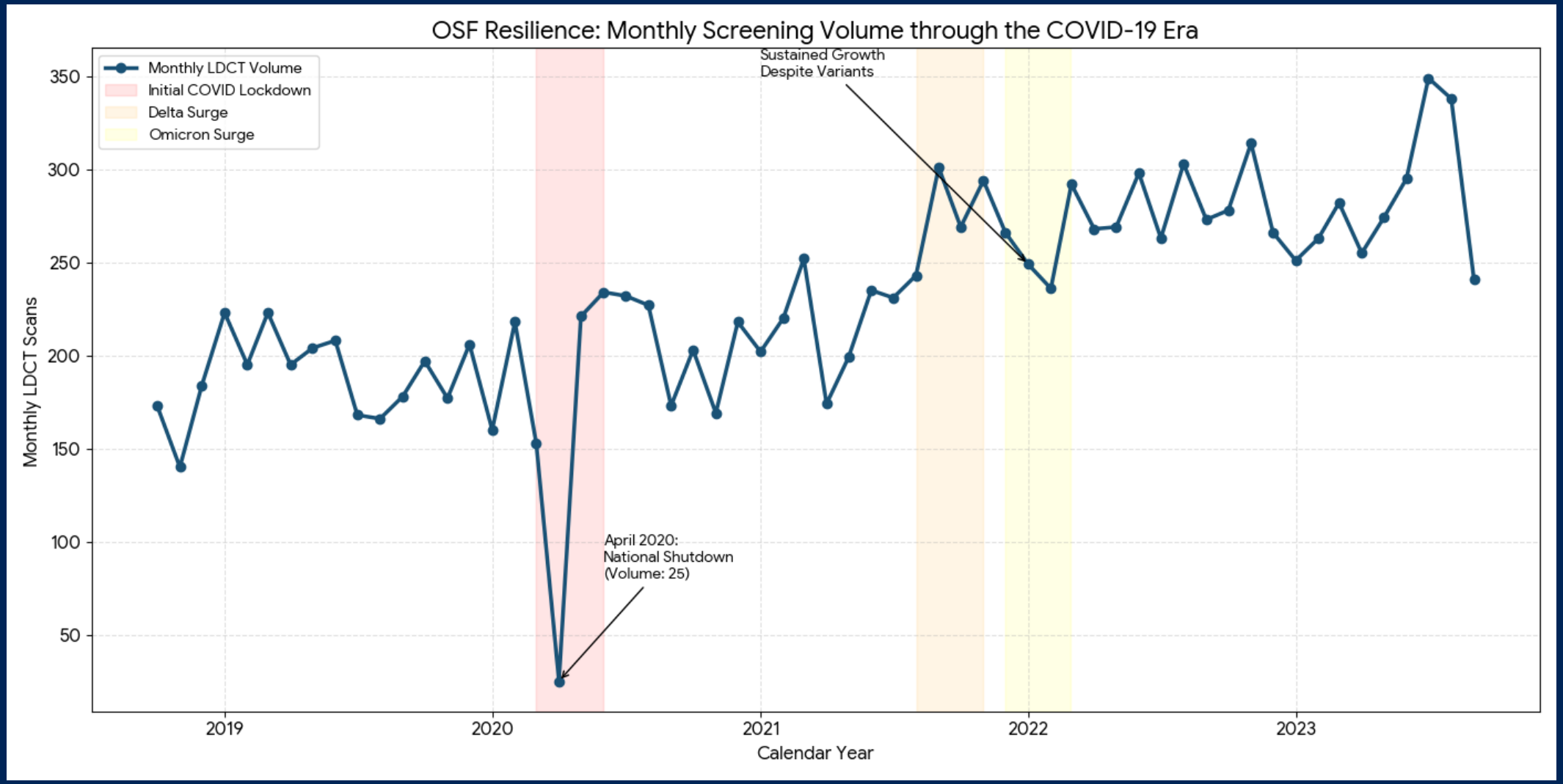
Screening rate

Year	OSF Annual LDCT Volume	OSF Screening Rate (%)	National Screening Rate (%)*	Performance Gap
2020	2,223	18.2%	14.5%	+3.7%
2021	2,647	21.4%	14.8%	+6.6%
2022	3,280	27.8%	15.5%	+12.3%
2023	3,406	33.6%	16.0%	+17.6%
2024	3,522	38.2%	18.2%	+20.0%
2025	4,108	42.8%	19.5%	+23.3%

**National benchmarks based on American Lung Association "State of Lung Cancer" annual reports and CDC/ACS prevalence estimates.*

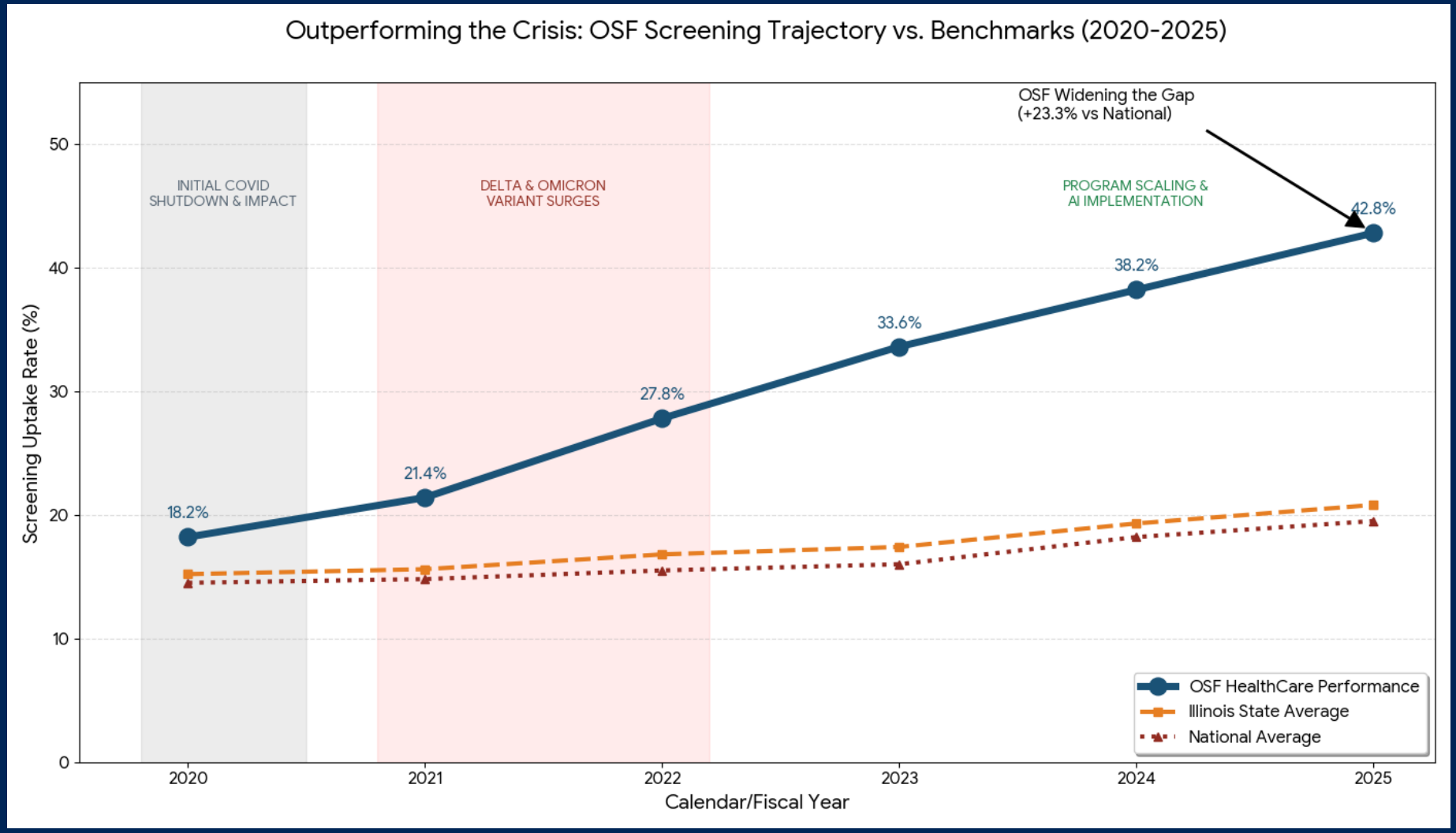
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Resilience during COVID



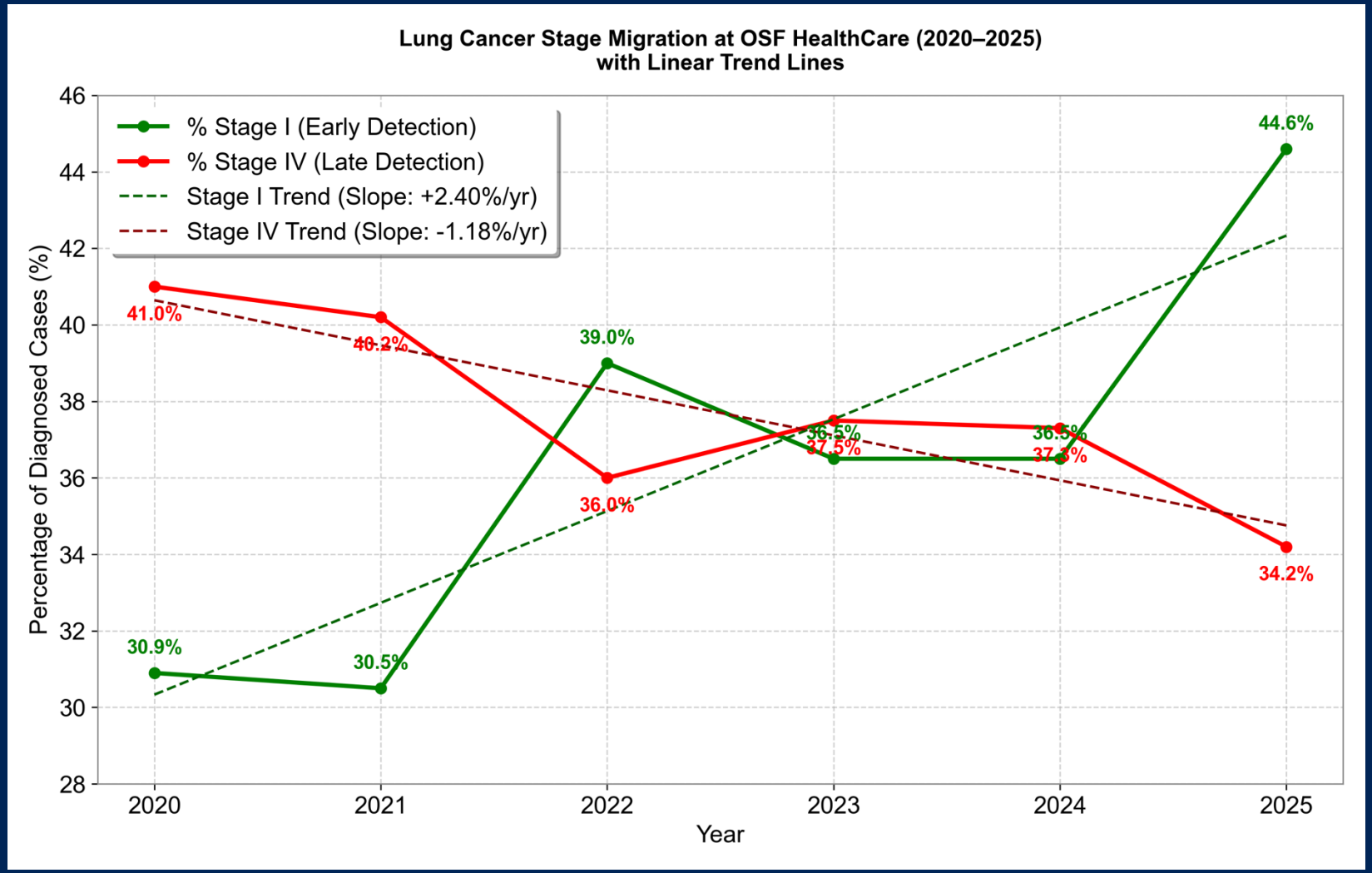
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Resilience during COVID



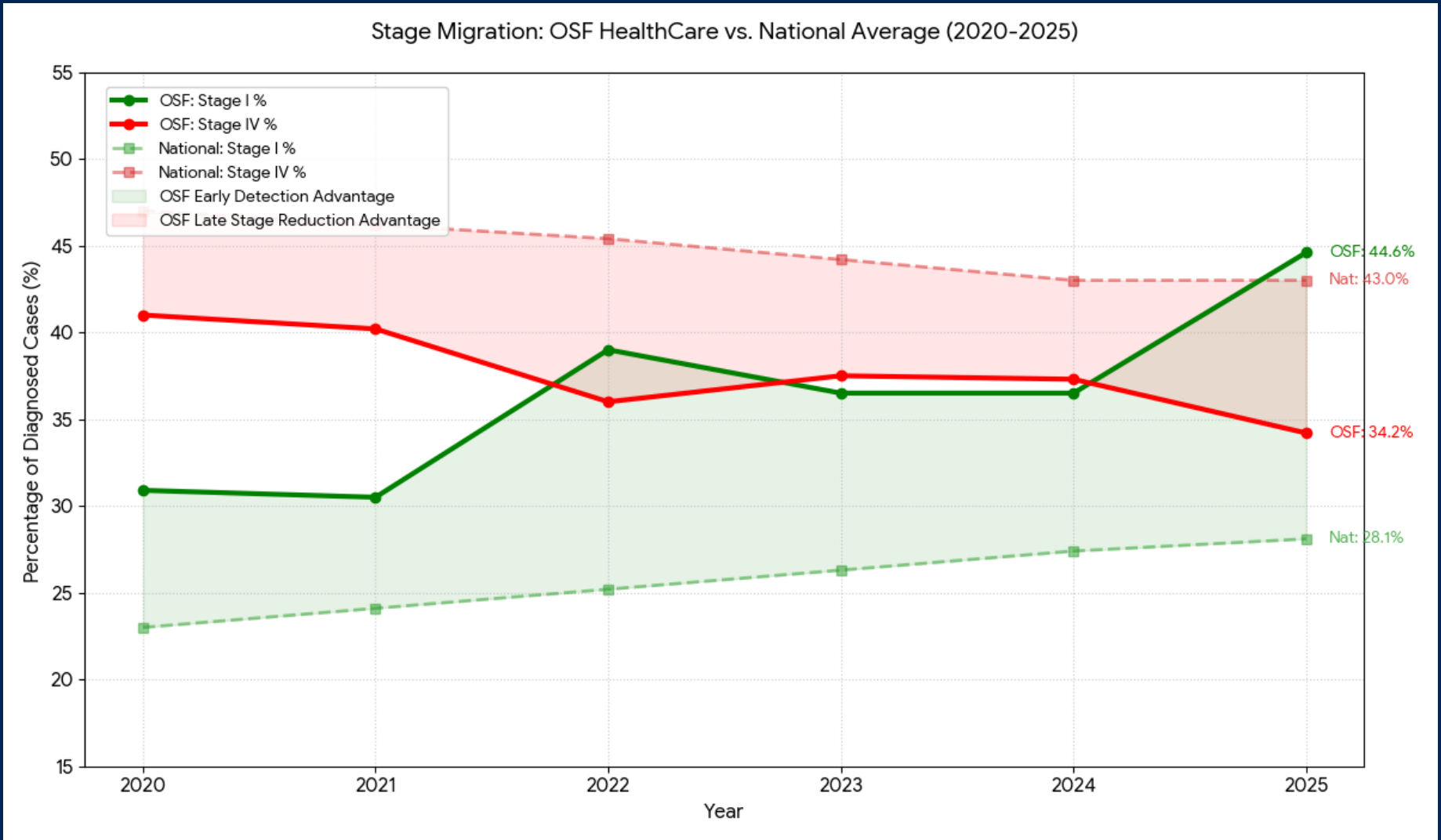
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Stage migration



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Stage migration



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Urban vs. rural

Urban

Urban / Tertiary Hubs These are major population centers and primary referral hubs for complex cases and surgical interventions:

- OSF Saint Francis Medical Center (Peoria, IL)
- OSF Saint Anthony Medical Center (Rockford, IL)
- OSF Little Company of Mary Medical Center (Evergreen Park / Chicago, IL)
- OSF Saint Joseph Medical Center (Bloomington, IL)
- OSF Heart of Mary Medical Center (Urbana, IL)
- OSF Sacred Heart Medical Center (Danville, IL)
- OSF Saint Anthony's Health Center (Alton, IL)

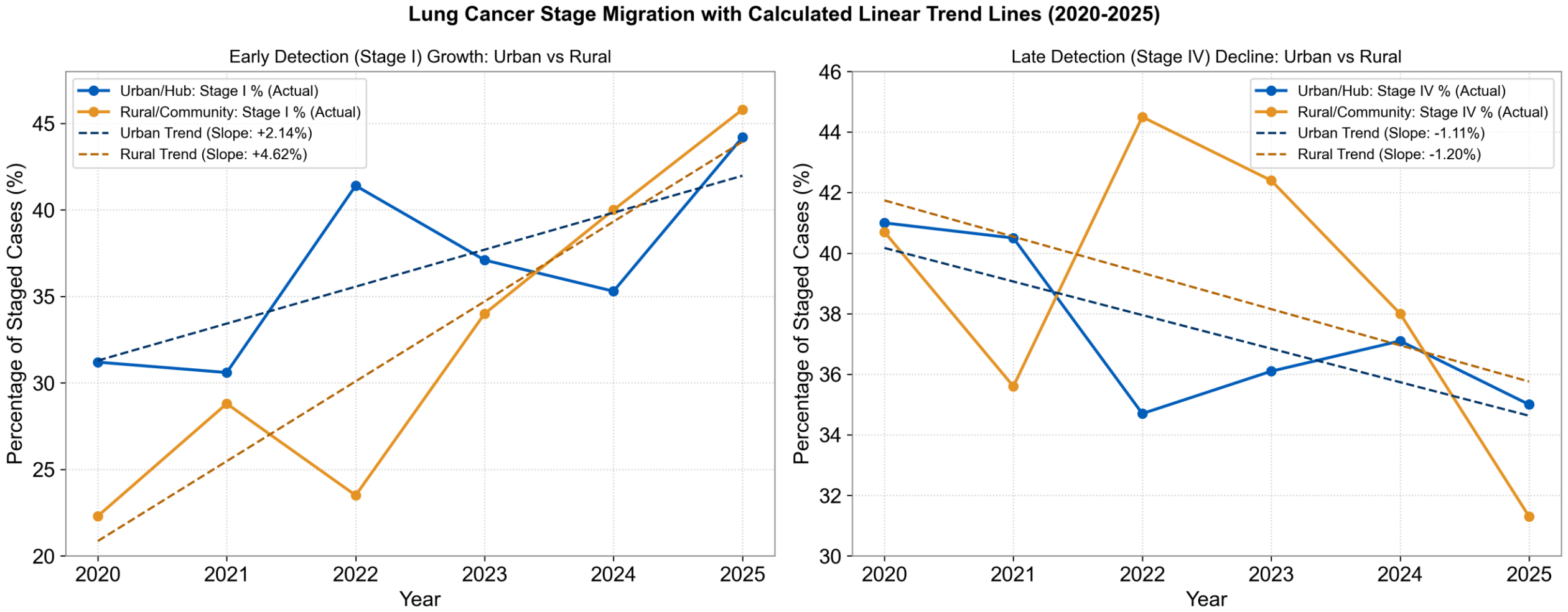
Rural

Rural / Community Access Sites These facilities serve smaller towns and more isolated populations:

- OSF Saint Elizabeth Medical Center (Ottawa / Peru, IL)
- OSF Saint Mary Medical Center (Galesburg, IL)
- OSF Saint James-JWA Medical Center (Pontiac, IL)
- OSF Saint Luke Medical Center (Kewanee, IL)
- OSF Saint Paul Medical Center (Mendota, IL)
- OSF Holy Family Medical Center (Monmouth, IL)
- OSF Saint Clare Medical Center (Princeton, IL)
- OSF St. Francis Hospital (Escanaba, MI)
- OSF Saint Katharine Medical Center

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Urban vs. rural



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Conclusion

- **AI-assisted** lung cancer screening program can improve screening uptake and improve early-stage detection
- Multifaceted approach combining **centralized navigation** and **innovative screening technologies** can further improve screening uptake
- Multifaceted hub-and-spoke model can dramatically benefit cancer screening in rural areas

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