

# Management of the Neck in Early Stage Oral Cancer

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November 8, 2024

# Outline

- **Background on Elective Neck Dissection in Oral Cavity Cancer**
- **Recent Advances**
  - **Sentinel lymph node biopsy vs. END**
- **Ongoing NRG-HN006 trial**

## Background

Elective Neck Dissection in early stage oral cavity cancer

# Early Stage Oral Cavity Cancer

- Early Stage: T1-T2N0
- Clinically node negative
- Most recent AJCC 8<sup>th</sup> edition staging: includes DOI

T Category	T Criteria
TX	Primary tumor cannot be assessed
Tis	Carcinoma in situ
T1	Tumor $\leq 2$ cm, $\leq 5$ mm DOI
T2	Tumor $\leq 2$ cm, DOI $> 5$ mm and $\leq 10$ mm or tumor $> 2$ cm but $\leq 4$ cm, and $\leq 10$ mm DOI
T3	Tumor $> 4$ cm or any tumor $> 10$ mm DOI
T4	Moderately advanced or very advanced local disease
T4a	Moderately advanced local disease: (lip) tumor invades through cortical bone or involves the inferior alveolar nerve, floor of mouth, or skin of face (i.e., chin or nose); (oral cavity) tumor invades adjacent structures only (e.g., through cortical bone of the mandible or maxilla, or involves the maxillary sinus or skin of the face); note that superficial erosion of bone/tooth socket (alone) by a gingival primary is not sufficient to classify a tumor as T4
T4b	Very advanced local disease; tumor invades masticator space, pterygoid plates, or skull base and/or encases the internal carotid artery

# Elective Neck Dissection for early oral cavity cancer

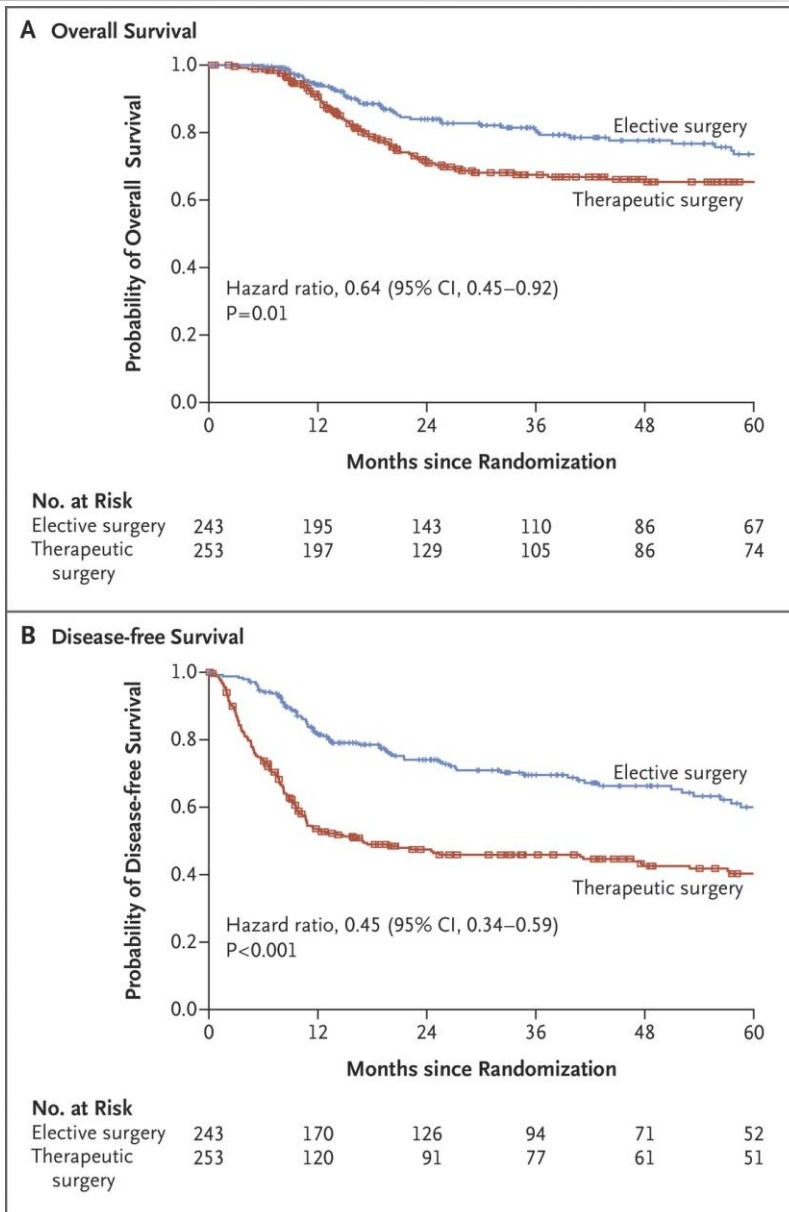
*The NEW ENGLAND JOURNAL of MEDICINE*

ORIGINAL ARTICLE

## Elective versus Therapeutic Neck Dissection in Node-Negative Oral Cancer

Anil K. D'Cruz, M.S., D.N.B., Richa Vaish, M.S., Neeti Kapre, M.S., D.N.B., Mitali Dandekar, M.S., D.N.B., Sudeep Gupta, M.D., D.M., Rohini Hawaldar, B.Sc., D.C.M., Jai Prakash Agarwal, M.D., Gouri Pantvaidya, M.S., D.N.B., Devendra Chaukar, M.S., D.N.B., Anuja Deshmukh, M.S., D.L.O., D.O.R.L., Shubhada Kane, M.D., Supreeta Arya, M.D., D.N.B., D.M.R.D., Sarbani Ghosh-Laskar, M.D., D.N.B., Pankaj Chaturvedi, M.S., F.A.I.S., Prathamesh Pai, M.S., D.N.B., D.O.R.L., Sudhir Nair, M.S., M.Ch., Deepa Nair, M.S., D.N.B., D.O.R.L., and Rajendra Badwe, M.S., for the Head and Neck Disease Management Group

- Prospective RCT
  - Arm 1: END at time of primary resection
  - Arm 2: Primary resection followed by therapeutic ND at later date
- Outcomes: DFS and OS



- 3 year OS: 80.0% in END group vs. 67.5% in TND group
  - 50 deaths in END group vs. 79 deaths in TND group
- 3 year DFS: 69.5% in END group vs. 45.9% in TND group
  - 81 recurrences in END group vs. 146 recurrences in TND group
- Enrollment stopped in trial early 2/2 safety committee finding the clear superiority of END

# END for all early stage OC?



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EJSO 32 (2006) 795–803

# EJSO

the Journal of Cancer Surgery

[www.ejso.com](http://www.ejso.com)

## Depth of invasion is the most significant histological predictor of subclinical cervical lymph node metastasis in early squamous carcinomas of the oral cavity

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Accepted 3 May 2006

Available online 13 June 2006

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Oral Oncology 48 (2012) 337–342

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**Tumour infiltration depth  $\geq 4$  mm is an indication for an elective neck dissection in pT1cN0 oral squamous cell carcinoma**

L.J. Melchers<sup>a,b,\*</sup>, E. Schuurin<sup>b</sup>, B.A.C. van Dijk<sup>c</sup>, G.H. de Bock<sup>d</sup>, M.J.H. Witjes<sup>a</sup>, B.F.A.M. van der Laan<sup>e</sup>, J.E. van der Wal<sup>b,f,g</sup>, J.L.N. Roodenburg<sup>a,g</sup>

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# END for all early stage OC?



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**Tumour infiltra  
in pT1cN0 oral**

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J.E. van der Wal<sup>b,f,g</sup>

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**Depth of invasion in early stage oral cavity squamous cell carcinoma: The optimal cut-off value for elective neck dissection**

Cornelia G.F. van Lanschot<sup>a,b,\*</sup>, Yoram P. Klazen<sup>d</sup>, Maria A.J. de Ridder<sup>e</sup>, Hetty Mast<sup>d</sup>, Ivo ten Hove<sup>d</sup>, José A. Hardillo<sup>a</sup>, Dominiek A. Monserez<sup>a</sup>, Aniel Sewnaik<sup>a</sup>, Cees A. Meeuwis<sup>a</sup>, Stijn Keereweer<sup>a</sup>, Yassine Aaboubout<sup>b,c</sup>, Elisa M. Barroso<sup>b,c</sup>, Quincy M. van der Toom<sup>a</sup>, Tom C. Bakker Schut<sup>b</sup>, Eppo B. Wolvius<sup>d</sup>, Robert J. Baatenburg de Jong<sup>a</sup>, Gerwin J. Puppels<sup>b</sup>, Senada Koljenović<sup>b,c</sup>



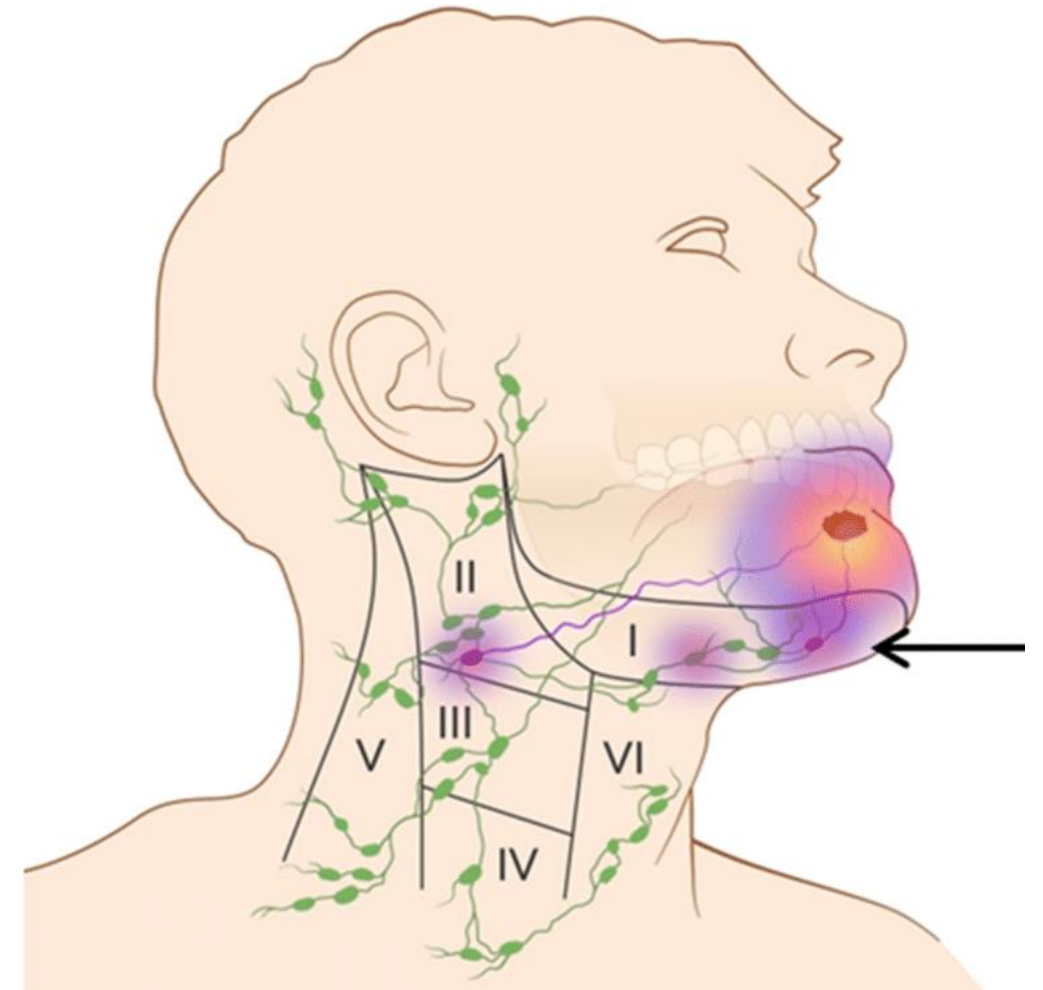
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# Surgical Management of the Neck

## Recent Advances

# Less invasive options?

- Sentinel lymph node biopsy (SNB)
  - Injection of methylene blue dye and/or a radiotracer to locate and dissect the lymph node that the primary cancer first drains into
  - Widely used in other cancers, and is a justifiable alternative to total lymph node dissection in breast, melanoma, vulval, and penile cancers
- Potential advantages over END:
  - Shoulder dysfunction
  - Scar length
  - Decreased hospital LOS



# SENT trial: Sentinel European Node Trial

- EORTC 24021: prospective, observational study 2015
  - 14 European centers w/ 415 pts: radiologically staged T1-T2N0 SCC
  - SLNB with completion ND in pts with positive SLNB
- Results:
  - Positive SLN = 23% (94 in 415)
  - False-negative in 14% (15 in 109) → rescued by salvage therapy
  - Recurrence after +SLNB + ND: 22 pts, 73% in the neck
  - Only minor complications (3%) following SLNB
  - Disease-specific survival = 94% T
  - SLNB sensitivity = 86% , NPV 95%
- SNB is a reliable and safe oncological technique for staging the clinically N0 neck in patients with T1 and T2 oral cancer

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## Neck Dissections Based on Sentinel Lymph Node Navigation Versus Elective Neck Dissections in Early Oral Cancers: A Randomized, Multicenter, and Noninferiority Trial

Yasuhisa Hasegawa, MD, PhD<sup>1</sup>; Kiyooki Tsukahara, MD, PhD<sup>2</sup>; Seiichi Yoshimoto, MD, PhD<sup>3</sup>; Kouki Miura, MD, PhD<sup>4</sup>; Junkichi Yokoyama, MD, PhD<sup>5</sup>; Shigeru Hirano, MD, PhD<sup>6</sup>; Hirokazu Uemura, MD, PhD<sup>7</sup>; Masashi Sugawara, MD, PhD<sup>8</sup>; Tomokazu Yoshizaki, MD, PhD<sup>9</sup>; Akihiro Homma, MD, PhD<sup>10</sup>; Kazuaki Chikamatsu, MD, PhD<sup>11</sup>; Mikio Suzuki, MD, PhD<sup>12</sup>; Akihiro Shiotani, MD, PhD<sup>13</sup>; Takashi Matsuzuka, MD, PhD<sup>1,14</sup>; Naoyuki Kohno, MD, PhD<sup>15</sup>; Masakazu Miyazaki, MD, PhD<sup>16</sup>; Isao Oze, MD, PhD<sup>17</sup>; Keitaro Matsuo, MD, PhD<sup>17</sup>; Shigeru Kosuda, MD, PhD<sup>18</sup>; and Yasushi Yatabe, MD, PhD<sup>3</sup>; for the HNCMM Research Group

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- RCT: Selective ND vs. SLN directed ND
  - T1-2N0 SCCa, with  $\geq 4$  mm
- 3-year OS: SLNB group (87.9%) vs. ND group (86.6%) *P* for noninferiority  $< .001$
- 3-year DFS: SLNB 78.7% vs. ND 81.3%
- Neck functionality in SLNB group significantly better than ND group

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## Equivalence Randomized Trial to Compare Treatment on the Basis of Sentinel Node Biopsy Versus Neck Node Dissection in Operable T1-T2N0 Oral and Oropharyngeal Cancer

Renaud Garrel, MD, PhD<sup>1</sup>; Gilles Poissonnet, MD<sup>2</sup>; Antoine Moyà Plana, MD<sup>3</sup>; Nicolas Fakhry, MD, PhD<sup>4</sup>; Gilles Dolivet, MD, PhD<sup>5</sup>; Benjamin Lallemand, MD, PhD<sup>6</sup>; Jérôme Sarini, MD<sup>7</sup>; Sebastien Vergez, MD, PhD<sup>7</sup>; Bruno Guelfucci, MD<sup>8</sup>; Olivier Choussy, MD<sup>9</sup>; Vianney Bastit, MD<sup>10</sup>; Fanny Richard, MD<sup>1</sup>; Valérie Costes, MD, PhD<sup>11</sup>; Paul Landais, MD, PhD<sup>12</sup>; Françoise Perriard<sup>12</sup>; Jean Pierre Daures, MD, PhD<sup>12</sup>; Delphine de Verbizier, MD<sup>13</sup>; Valentin Favier, MD<sup>1</sup>; and Marie de Boutray, MD<sup>1</sup>

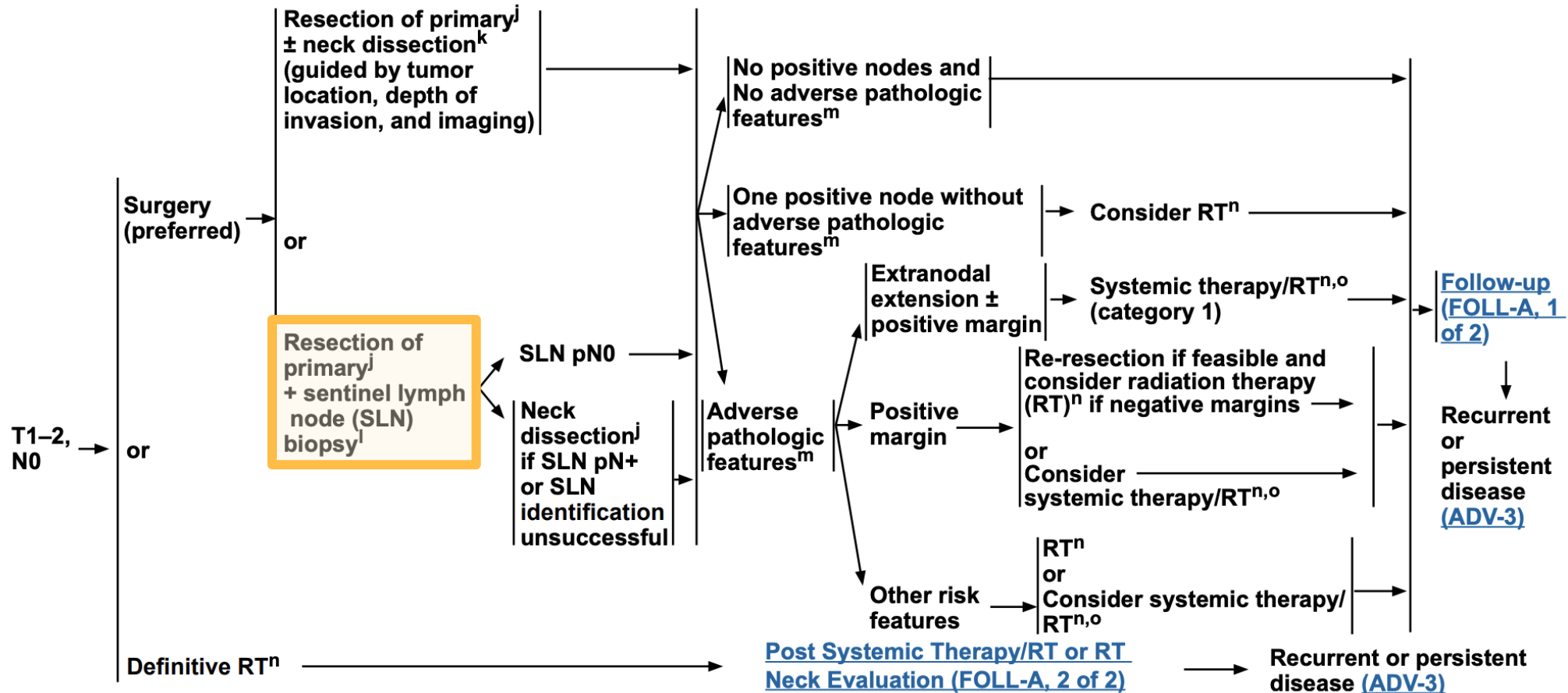
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- RCT: Selective ND vs. SLN directed ND (intraop w/ completion same day)
  - Also assessed: hospital LOS, neck and shoulder morbidity, and # PT Rx in 2 yr s/p sx
- 2-year RFS: SLNB group (90.7%) vs. ND group (89.6%) *P* for noninferiority < .01
- Hospital LOS: SLNB 7 days, ND 8 days (*P*<0.01)
- Functional outcomes significantly worse in ND until 6 months post-op

# NCCN Guidelines Version 5.2024 Cancer of the Oral Cavity (Including Mucosal Lip)

Buccal mucosa, floor of mouth, oral tongue, alveolar ridge, retromolar trigone, hard palate<sup>a</sup>

**CLINICAL STAGING**      **TREATMENT OF PRIMARY AND NECK**      **ADJUVANT TREATMENT**      **FOLLOW-UP**





# Is it being utilized in practice?

- SNB is an uncommon modality for neck management: used in approximately 2.9% of stage I to II OCSCC cases captured by the NCDB between 2012 and 2015



Ongoing Trial

NRG-HN006 Trial in US for SLNB

# NRG- HN006

- Randomized to SLNB group vs. Elective ND group
- Primary Outcomes:
  - Patient-reported neck and shoulder function (Neck Dissection Impairment Index)
  - Disease-Free Survival
- Secondary Outcomes:
  - Overall Survival, Pattern of failure: Loco-regional Failure vs. Distant metastasis, Patient-reported shoulder-related QOL, General QOL, Nodal metastasis detection rate, Pathologic false omission rate, Post-surgery patient-reported outcome
- Opened 7/2020, still recruiting

# Key Points

- The neck should be addressed for Oral Cavity SCCa  $\geq$  4mm DOI
- Traditionally recommendation was for END
- SLNB has become more widely used and has data to back its safety and efficacy
- Awaiting results of NRG-HN006 Trial

Thank you

Questions?

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