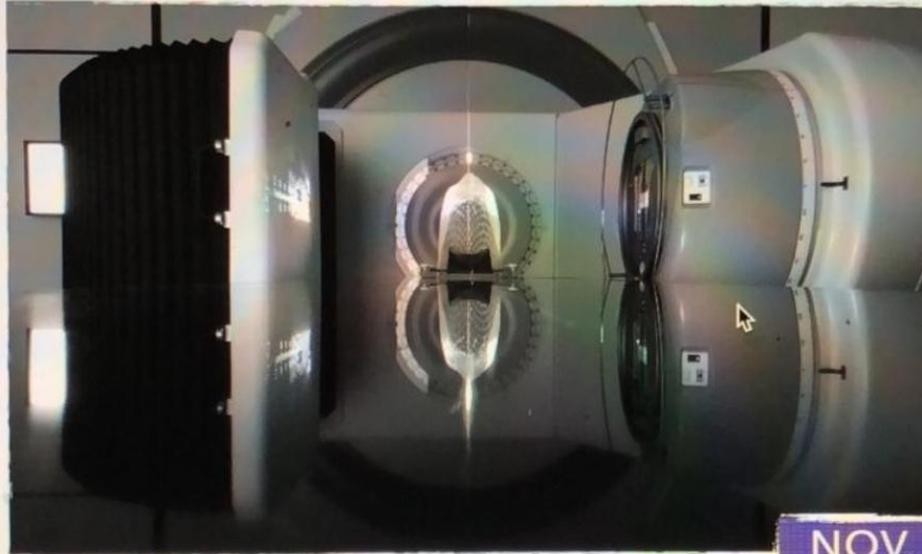


5ta. Jornada Académica de Integración en Radio - Oncología

En homenaje a nuestro querido Director



“Prof. Agdo. Dr. Alvaro Luongo Gardi”



Organiza Carrera de Tecnólogos en Radioterapia
EUTM. F.Medicina. UdelaR

NOV.
16

Sábado, 16 de Noviembre 2019 - 8:00 a.m.
Instituto Nacional del Cancer. Anfiteatro
Dirección: Joánico 3265. Montevideo. Uruguay



Inscripciones via e-mail: jornadastecrt2019@gmail.com



Dr. Mauricio Luongo

BRAQUITERAPIA EN TUMORES DE LENGUA



Ventajas

- ⊙ Permite obtener Dosis de Irradiación al Tumor o Lecho Tumoral no alcanzables mediante radioterapia externa con un mínimo de contribución de dosis sobre tejidos sanos.
- ⊙ En la práctica, **la Braquiterapia consigue el mejor ratio terapéutico** clínico en el Control Local, Toxicidad.

Ventajas

- El Efecto Radiobiológico es Continuo



NO REPOBLACIÓN CELULAR

Dosis alta al tumor en Tiempo Reducido

Volumen bien delimitado

INDICACIONES de BT

- Ginecológicas. Útero, cuello uterino, Vagina, Vulva.
- Próstata
- Mama
- Lengua, labios
- CAVUM  ORL
- Senos maxilares, Mejilla
- Piso de boca , paladar ,borde gingival
- CBP
- Esófago
- Piel
- Sarcomas de MM o retroperitoneales
- Recto , canal anal , margen anal
- Vía biliar
- Pene
- Vejiga
- SNC

Indicaciones en ORL

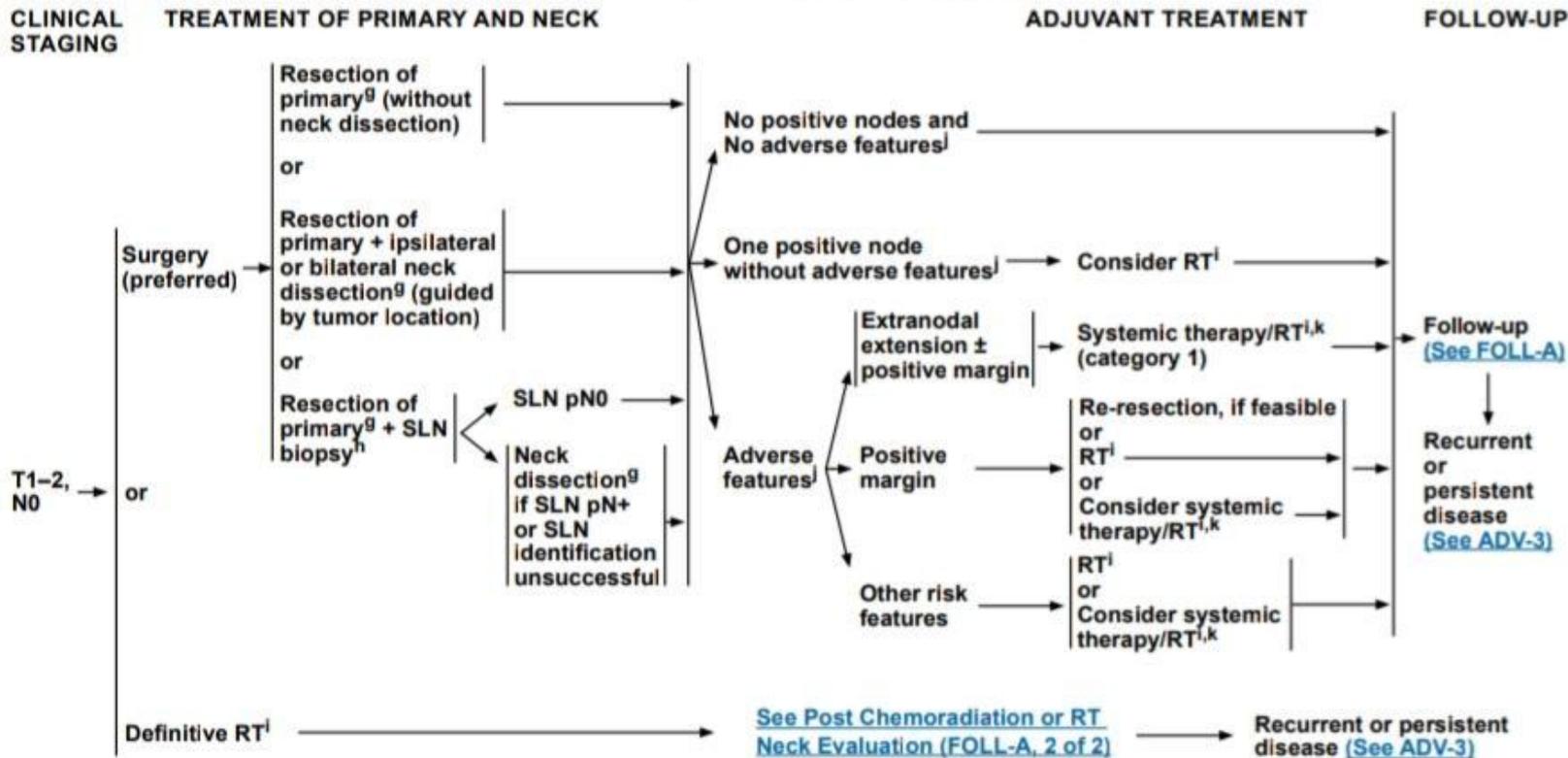
- ⊙ La Braquiterapia tiene un amplio uso en el cáncer de nasofaringe, paladar, **lengua**, mucosa yugal, labios.
- ⊙ Los Tumores con estadios T1-2 N0 pueden tratarse mediante Cirugía o Braquiterapia.
- ⊙ Como Irradiación Complementaria a Cirugía.
- ⊙ Como sobreimpresión de radioterapia externa.
- ⊙ Recomendación: Categoría 2^a

Mazeron JJ, Crook JM, Benck V et al. Iridium 192 implantation of T1 and T2 carcinomas of the mobile tongue. *Int J Radiat Oncol Biol Phys.* 1990 Dec;19(6):1369-76. • Leung TW, Tung SY, Sze WK et al. Salvage brachytherapy for patients with locally persistent nasopharyngeal carcinoma. *Int J Radiat Oncol Biol Phys.* 2000;47(2):405-412. • Martínez-Monge R, Cambeiro M. New techniques in irradiation: clinical implications of perioperative high-dose rate brachytherapy. *Ann Oncol.* 2005;16.

Indicaciones en Tumores de Lengua

- ⦿ Adyuvante solo lengua en Estadios precoces
- ⦿ Adyuvante como Boost Estadios mas avanzados
- ⦿ Radical curativo Tumores pequeños no Q
- ⦿ Paliativo del dolor o sangrados

Buccal mucosa, floor of mouth, anterior tongue, alveolar ridge, retromolar trigone, hard palate



^gSee Principles of Surgery (SURG-A).

^hSee Sentinel Lymph Node Biopsy in Principles of Surgery (SURG-A, 7 of 9).

ⁱPrinciples of Radiation Therapy (OR-A).

^jAdverse risk features: extranodal extension, positive margins, pT3 or pT4 primary, pN2 or pN3 nodal disease, nodal disease in levels IV or V, perineural invasion, vascular invasion, lymphatic invasion (See Discussion).

^kSee Principles of Systemic Therapy (CHEM-A).

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.



PRINCIPLES OF RADIATION THERAPY¹

DEFINITIVE:

RT Alone

• PTV:

- ▶ High risk: Primary tumor and involved lymph nodes [this includes possible local subclinical infiltration at the primary site and at the high-risk level lymph node(s)]:

- ◊ Fractionation:

- 66 Gy (2.2 Gy/fraction) to 70 Gy (2.0 Gy/fraction); daily Monday–Friday in 6–7 weeks²

- Concomitant boost accelerated RT:

- 72 Gy/6 weeks (1.8 Gy/fraction, large field; 1.5 Gy boost as second daily fraction during last 12 treatment days)

- 66–70 Gy (2.0 Gy/fraction; 6 fractions/wk accelerated)

- Hyperfractionation: 81.6 Gy/7 weeks (1.2 Gy/fraction, twice daily)

- ▶ Low to intermediate risk: Sites of suspected subclinical spread

- ◊ 44–50 Gy (2.0 Gy/fraction) to 54–63 Gy (1.6–1.8 Gy/fraction)³

• Brachytherapy

- ▶ Interstitial brachytherapy is considered for selected cases.^{4,5}

- ◊ LDR brachytherapy (0.4–0.5 Gy per hour):

- Consider LDR boost 20–35 Gy if combined with 50 Gy EBRT or 60–70 Gy over several days if using LDR as sole therapy.

- ◊ HDR brachytherapy:

- Consider HDR boost 21 Gy at 3 Gy/fraction if combined with 40–50 Gy EBRT or 45–60 Gy at 3–6 Gy/fraction if using HDR as sole therapy.

For unresectable disease, [see ADV-1](#).

Either IMRT or 3D conformal RT is recommended.

¹See [Radiation Techniques \(RAD-A\)](#) and [Discussion](#).

²For doses >70 Gy, some clinicians feel that the fractionation should be slightly modified (eg, <2.0 Gy/fraction for at least some of the treatment) to minimize toxicity. An additional 2–3 doses can be added depending on clinical circumstances.

³Suggest 44–50 Gy in 3D conformal RT and sequentially planned IMRT or 54–63 Gy with IMRT dose painting technique (dependent on dose per fraction).

⁴Brachytherapy should be performed at centers where there is expertise in this modality. (Nag S, Cano ER, Demanes DJ, et al. The American Brachytherapy Society recommendations for high-dose-rate brachytherapy for head-neck carcinomas. *Int J Radiat Oncol Biol Phys* 2001;50:1190-1198; and Mazon JJ, Ardiet JM, Hale-Meder C, et al. GEC-ESTRO recommendations for brachytherapy for head and neck squamous cell carcinoma. *Radiother Oncol* 2009;91:150-156.)

⁵The interval between EBRT and brachytherapy should be as short as possible (1–2 weeks) depending on recovery from acute toxicity. The interval between HDR fractions should be at least 6 hours.

Note: All recommendations are category 2A unless otherwise indicated.

Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

Proceso del Implante

- ⦿ H. Clínica y Anatomía Patológica
- ⦿ Imágenes Pre. OP. RNM
- ⦿ Examen físico, cuello.
- ⦿ Block Quirúrgico BT intersticial
- ⦿ Imágenes de TC para simulación
- ⦿ Planificación 3D dosis, fraccionamiento
- ⦿ Controles.

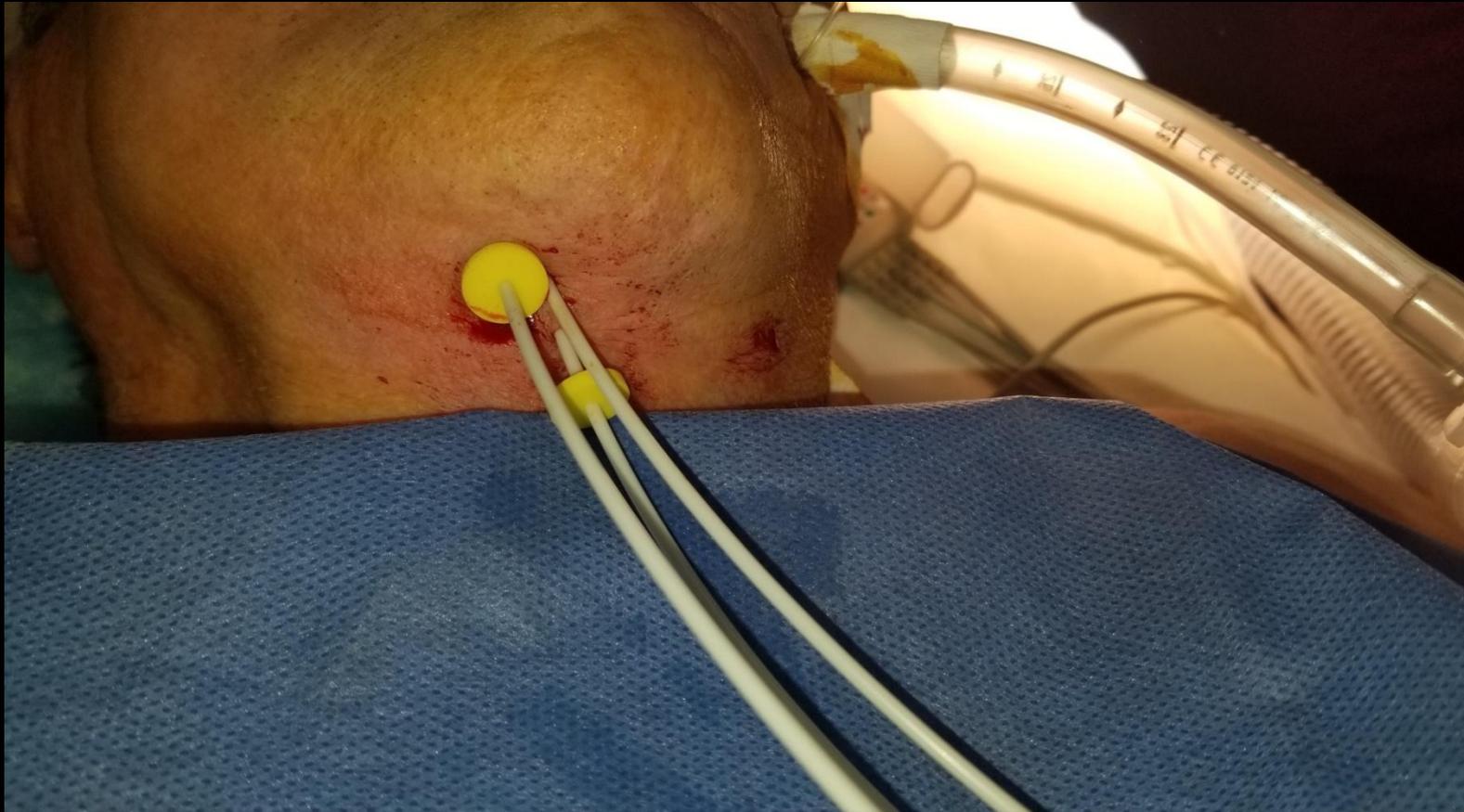
Tumor borde lateral



Colocación de catéteres

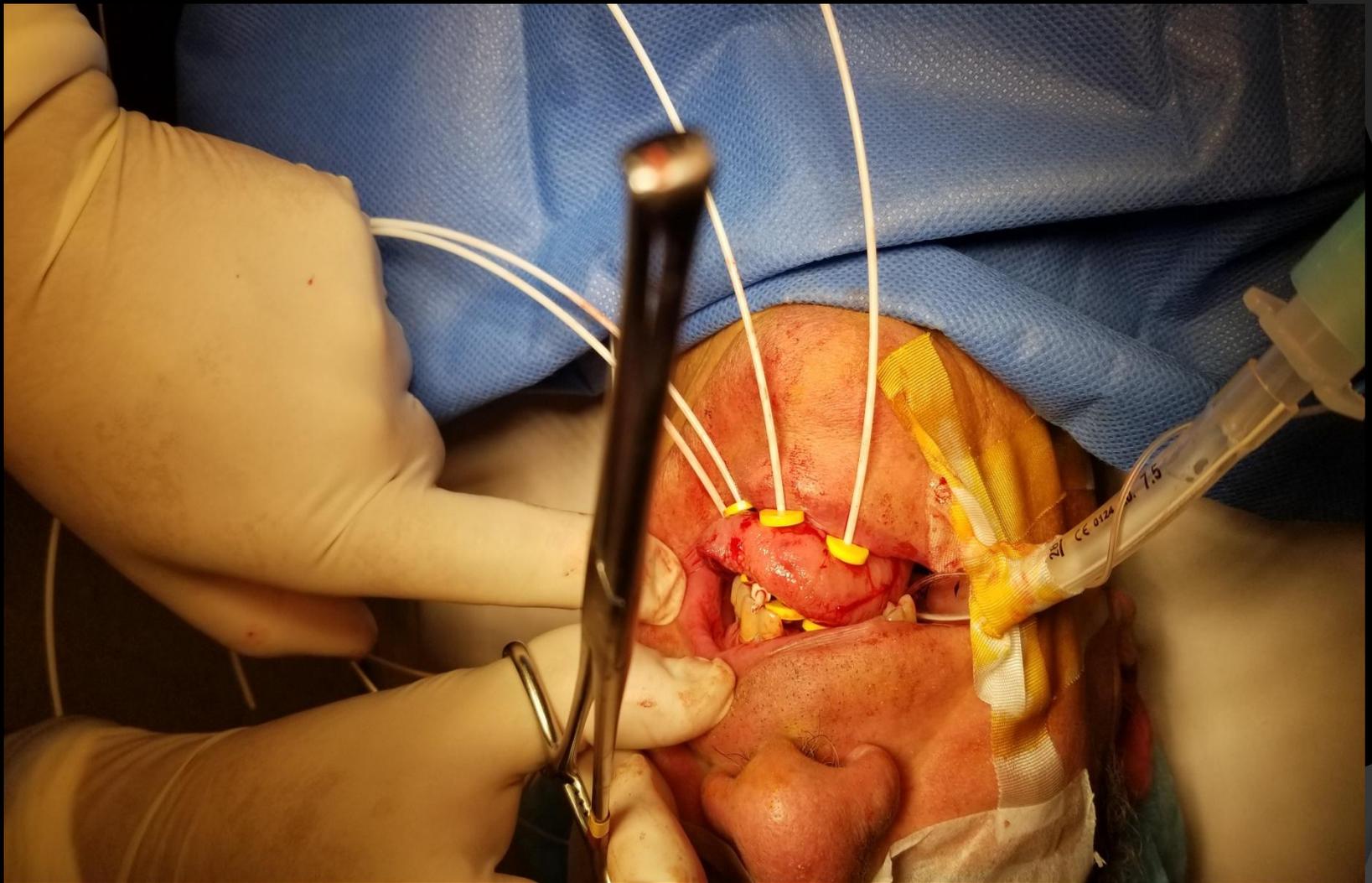


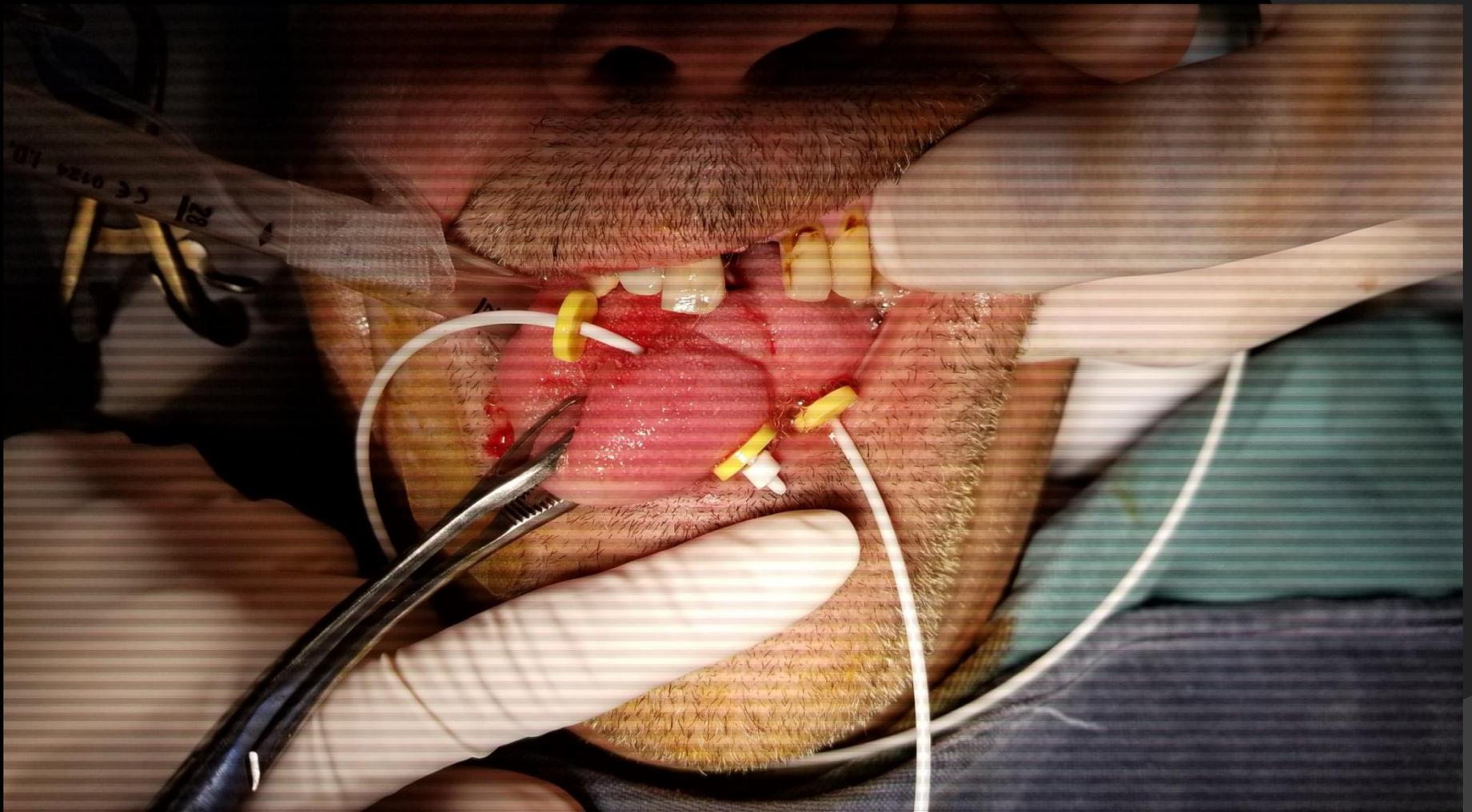
Salida de catéteres por cuello



Salida por boca

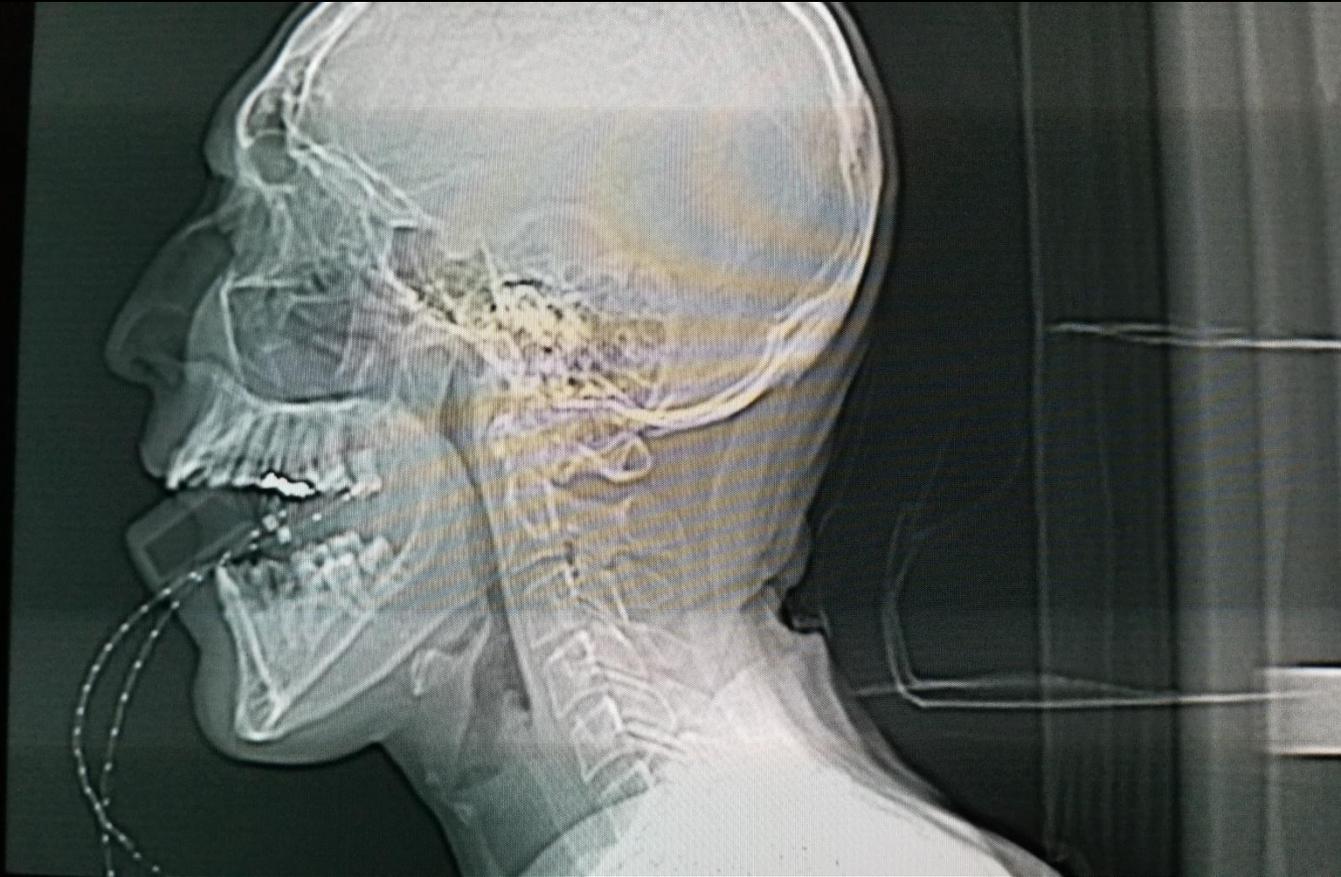








Tc de Simulación Referenciales



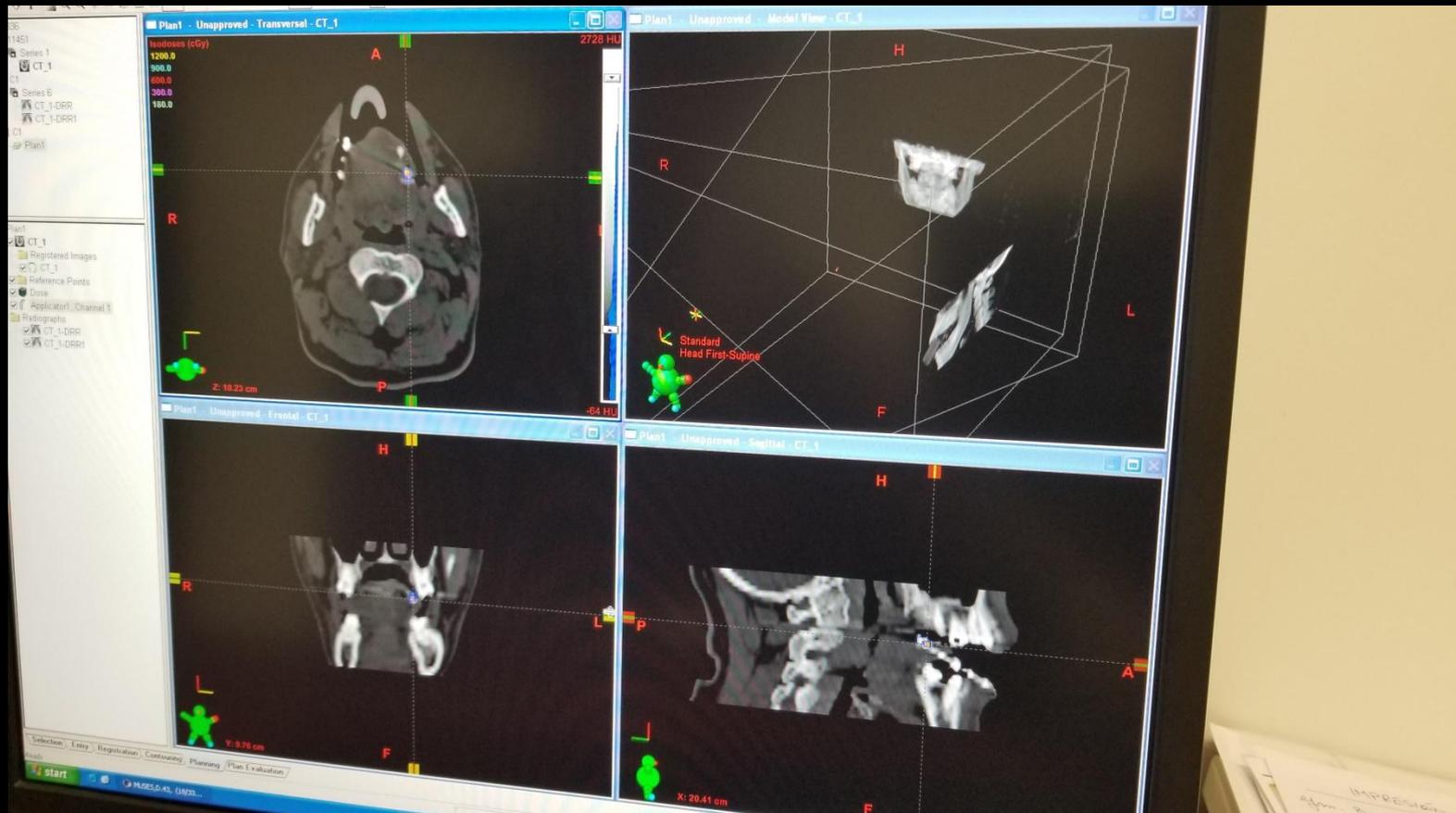
Tc de Simulación

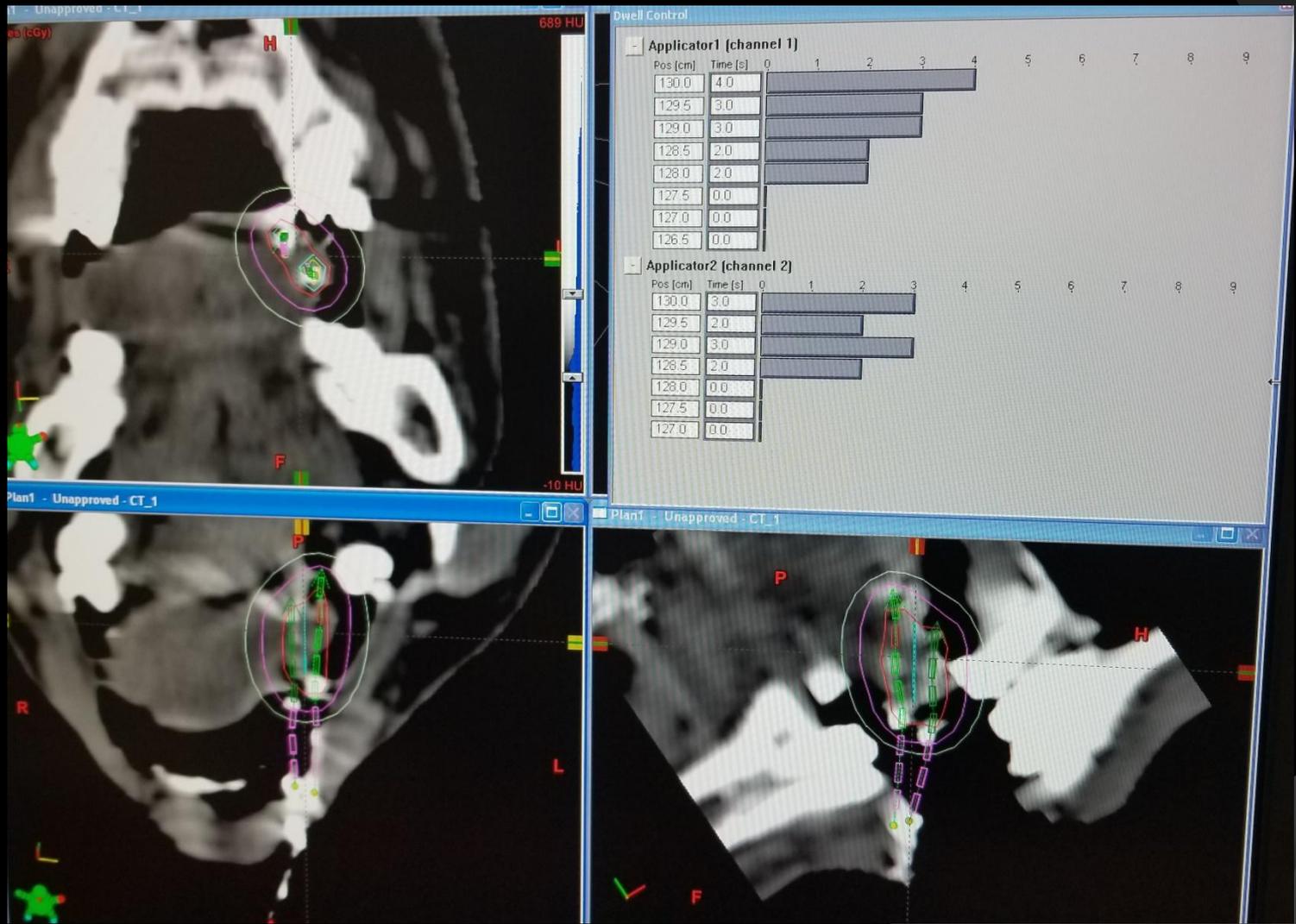


Planificación y control



Planificación en 3 planos





Conexión al robot



Retiro del implante



Control a los 10 días



Control 15 días



Control al mes



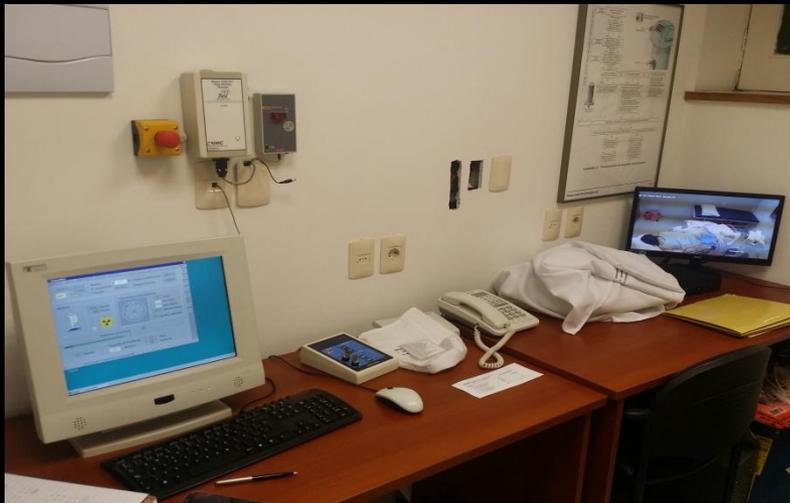
Control 2 meses



Control anual



Centro de Braquiterapia HDR 3D



Periodo 12/2015 – 10/2019

- Total de pacientes 280
- 164 pacientes 58 % Ginecológicos
- 68 pacientes 24 % ORL (70% Lengua)
- 36 pacientes 13 % Digestivos
- 12 pacientes 5 % Otros

Cuando la vida
te separa de tu
hermano
querido ... el
recuerdo de su
sonrisa es su
mejor Recuerdo

