



# Ewing sarcoma of mandible a pediatric patient

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Associate professor of pediatric hematology and oncology

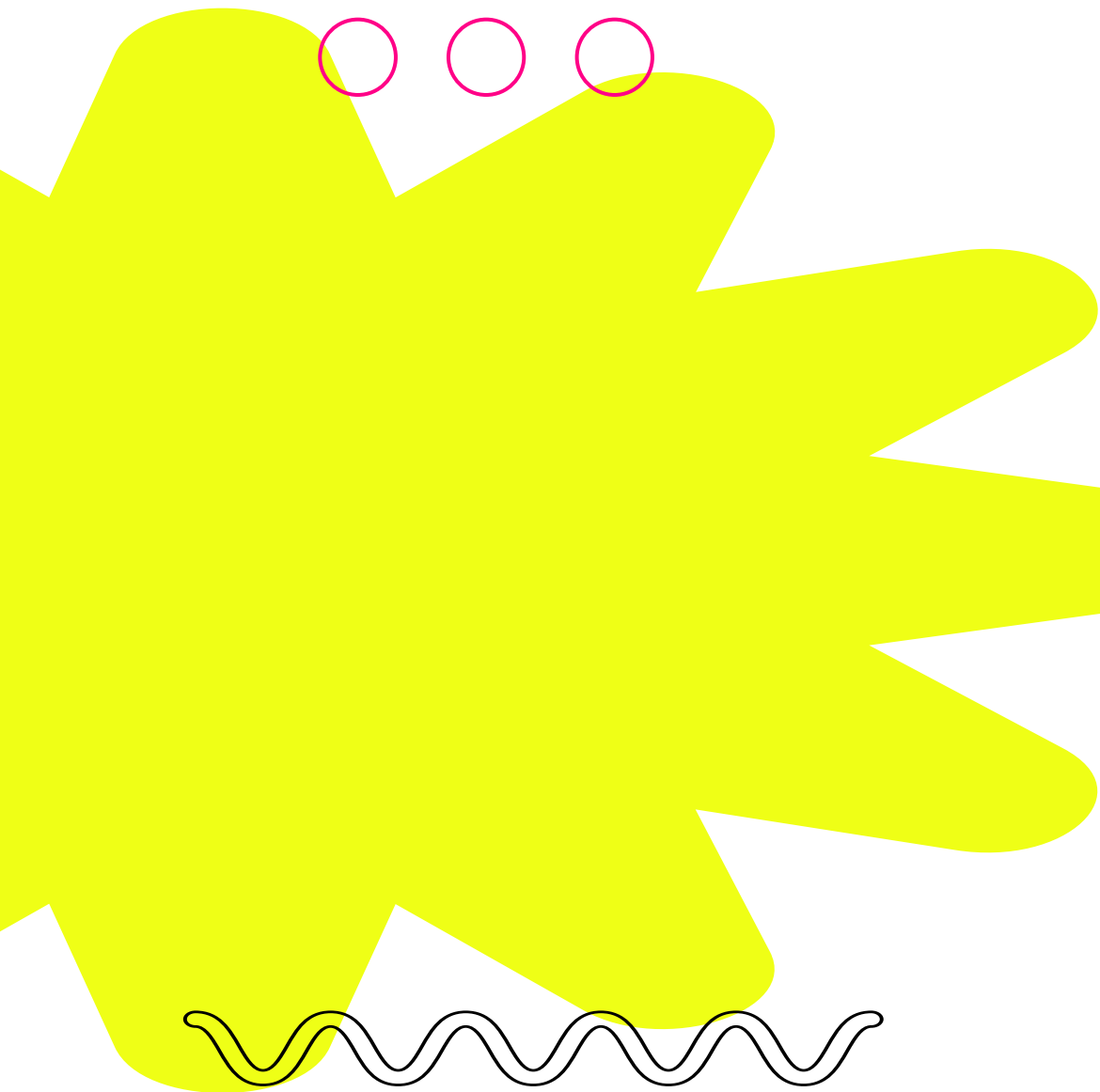
TUMS

2025



# ***INTRODUCTION***

- ***Ewing sarcoma of the mandible:***  
**3–5%** of pediatric cases
- ***Rare entity, often misdiagnosed as dental abscess***
- ***Early biopsy is crucial to avoid diagnostic delay***



***Persistent mandibular mass in children → always rule out malignancy***

***Early biopsy prevents diagnostic delay***

***Standard therapy = multi-agent chemotherapy + local control***

***Relapse is common → immunotherapy may help***

***Close follow-up is essential for early detection of recurrence***



# ***Case Presentation***

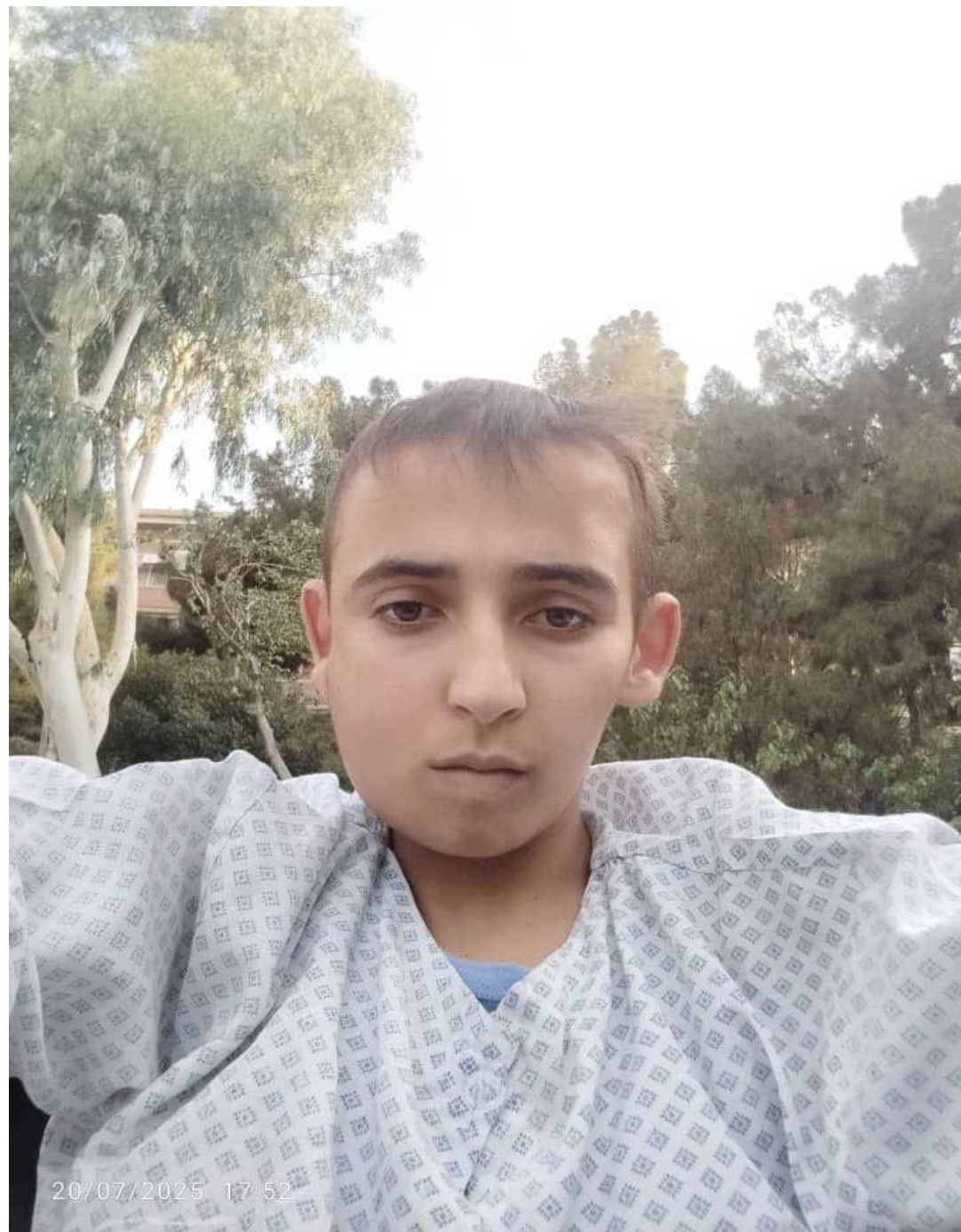
***11.5-year-old boy***

***Large, firm, painful mandibular mass (1 month duration)***

***Initially treated as dental abscess (antibiotics)***

***Progressive enlargement → biopsy performed***

- ***Pathology: small round blue cell tumor → Ewing sarcoma/PNET***



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# ***IHC***

***CD99 (weak +)***

***NKX2.2 (+)***

***Negative: LCA, CD34, myogenin ,  
desmin , synaptophysin, Sox10***

***Final diagnosis:  
Ewing sarcoma/PNET***



# PET-CT SCAN

Mehrunch Cancer clinic  
Nuclear Medicine &  
Molecular imaging

کلینیک تخصصی مهران  
بخش پزشکی هسته‌ای و تصویر برداری مولکولی

**<sup>18</sup>F-FDG PET-CT Report**

Patient Name: Mr. Bigdeli, Alihosein Date: 1402.04.26 (July 17, 2023)  
Age: 13Y/O Weight: 51kg  
Referring Physician: Dr. Nourbakhsh ID:180203

**Abdomen and Pelvis**

**Liver and Spleen:** No remarkable structural finding or abnormal FDG uptake is seen in the liver and spleen.

**Gastrointestinal/Peritoneal/Retroperitoneal:** Increased FDG uptake within the bowel loops without corresponding morphological lesion is most likely physiologic.

No remarkable lymphadenopathy or FDG-avid lesion is noted in the intraperitoneal and retroperitoneal regions. Physiologic uptake is seen throughout the gastrointestinal tract. No abnormal uptake is noted in the abdominal wall.

**Urinary System:** Physiologic uptake is noticed within kidneys, ureters and bladder.

**Other Abdominopelvic Viscera:** No abnormal uptake is noted in the adrenal glands, pancreas and other abdominopelvic viscera.

**Musculoskeletal System**

The previously seen expansile lytic lesion involving the left mandibular body and angle, in the left mandibular angle shows resolution of metabolic activity and decrease in size since the prior study (prior SUVmax = 3.8, measuring 3.8 x 2.5 cm, current SUVmax = 1.1, measuring 3.0 x 2.0 cm).

The previously seen ossified 1.5 cm lesion without significant FDG uptake (SUVmax = 2.5) in the right posterolateral aspect of the sphenoid sinus is stable since the prior study suggesting a healed lesion.

Again seen is an eccentric cortically-based lytic lesion with peripheral sclerosis without any associated periosteal reaction or soft tissue component showing FDG uptake (prior SUVmax = 3.5, current SUVmax = 4.0) in the distal of the right tibia, which is stable since the prior study and is more likely in favor of a benign entity such as Non-Ossifying Fibroma.

**Impression**

- When compared with the prior PET-CT study dated 1401.11.30, the current study reveals "complete metabolic response to treatment" due to:  
Interval decrease in size and resolution of metabolic activity of the previously seen expansile lytic lesion involving the left mandibular body and angle (non-viable lesion).

Yours sincerely,  
N. Khademi, MD, IBNM

آدرس: زنجان، بلوار پروفسور شوقی، بلوار مهران، کلینیک تخصصی مهران  
تلفن: ۰۲۴-۳۳۰۴۴۱۱۱

مرکز تخصصی تصویر برداری مولکولی  
کلینیک تخصصی سرطان خدرانه  
دکتر نیلوفر خادمی  
پرونده تخصصی پزشکی هسته‌ای  
۱۴۷۰۲۲





## *Imaging Findings*

***CT: 6×7×8 cm mandibular mass,  
sunburst periosteal reaction***

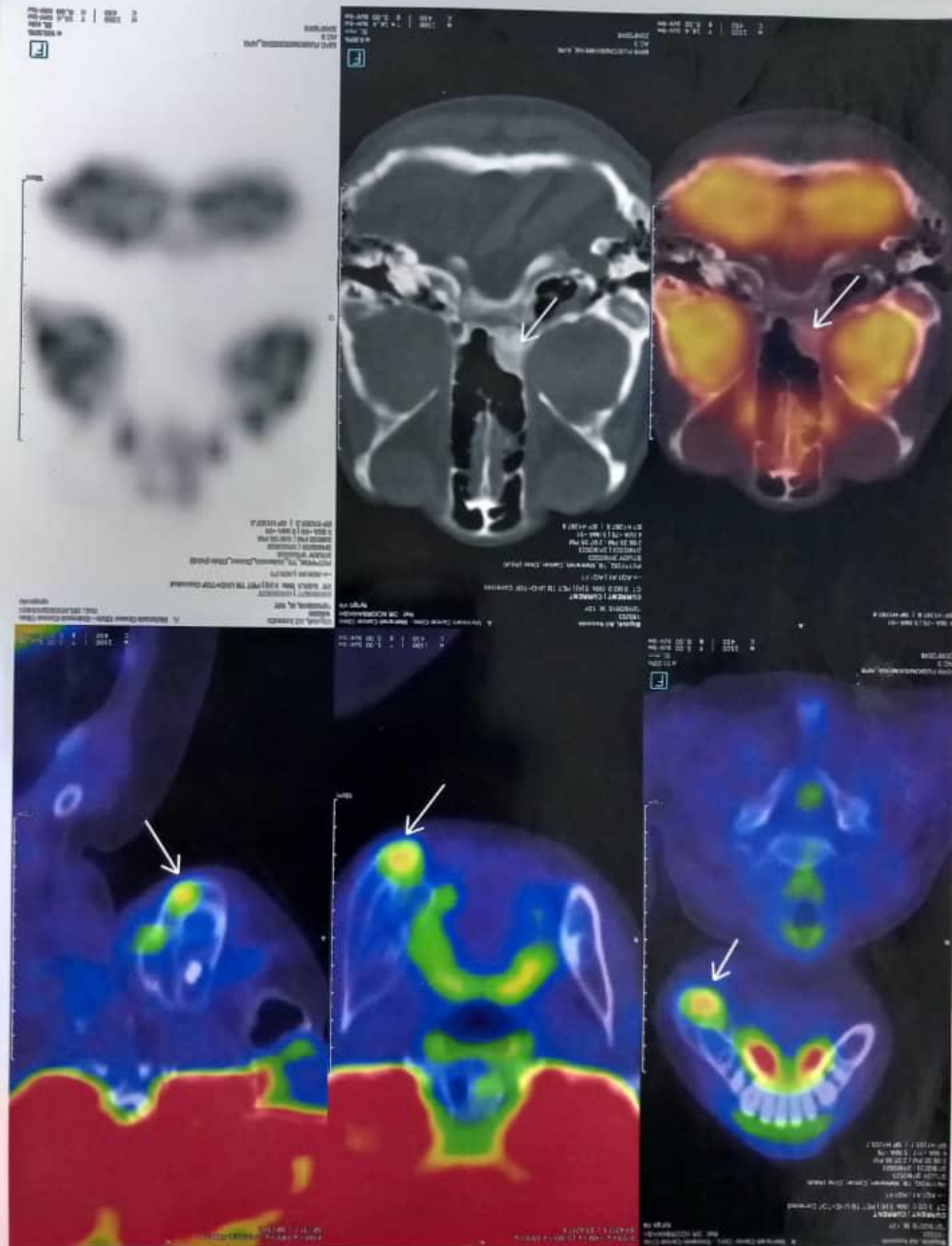
***MRI: heterogeneous tumor invading  
adjacent muscles***

***PET/CT: mandible + sphenoid sinus +  
tibia involvement***

***Chest CT/Abdomen US: no metastasis***

***BMA/BMB: normal***





## <sup>18</sup>F-FDG PET-CT Report

Patient Name: Mr. Bigdeli, Alihosein

Date: 1402.07.24 (Oct 16, 2023)

Age: 13Y/O

Weight: 50kg

Referring Physician: Dr. Nourbakhsh

ID:180203

### Impression

- When compared with the prior PET-CT study dated 1402.04.26, the current study reveals again no metabolically active tumoral lesion throughout the body indicating a "complete metabolic response to treatment" due to:

The previously seen expansile lytic lesion involving the left mandibular body and angle and an ossified lesion in the right posterolateral aspect of the sphenoid sinus have been stable since the prior study and are consistent with healed lesions (non-viable lesions). Follow-up is advised.

Please note: As a new finding, mucosal thickening and fullness of bilateral maxillary (more prominent on the right side) and ethmoidal sinuses with faint FDG uptake may suggest an infectious/inflammatory process. Follow-up after appropriate treatment is recommended.

Yours sincerely,

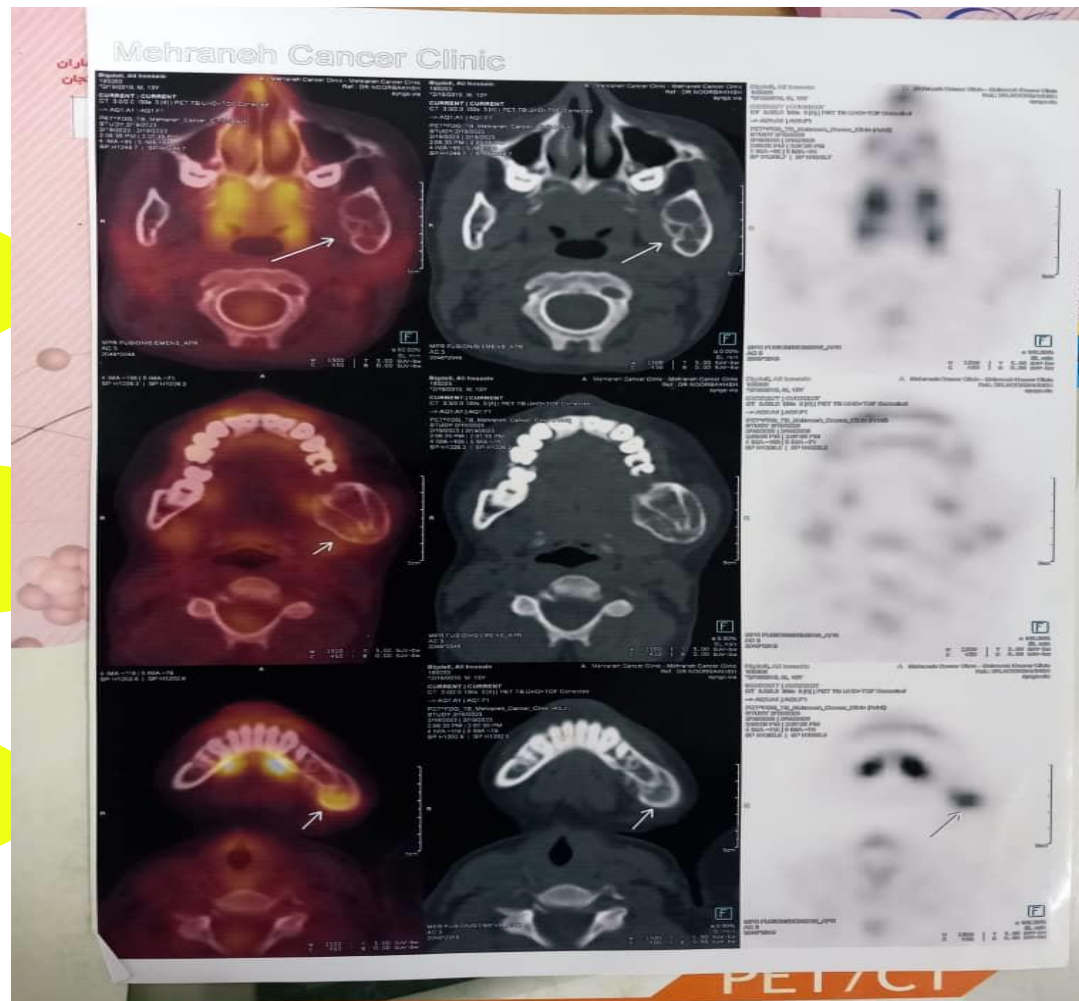
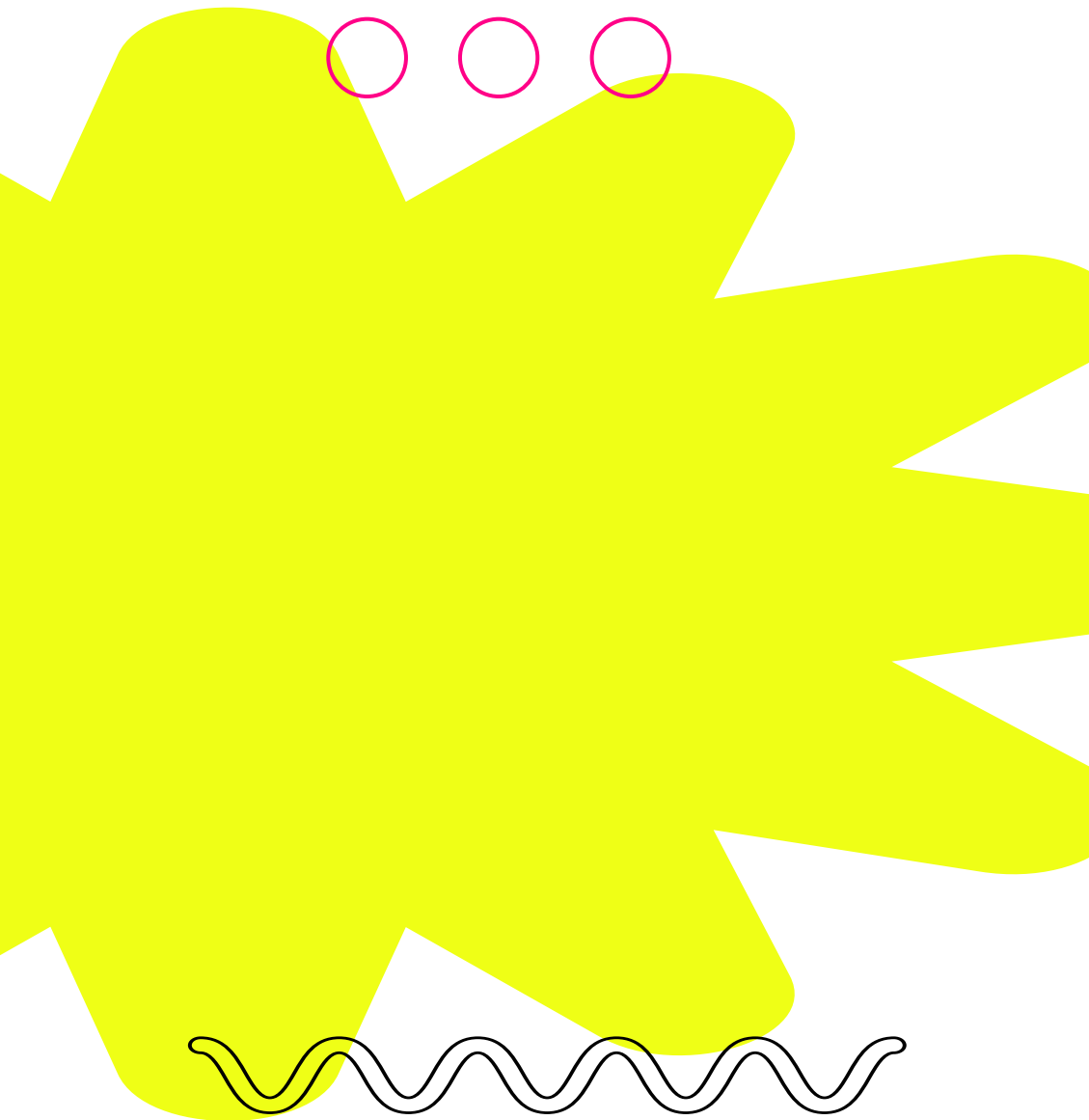
N. Khademi, MD, IBNM



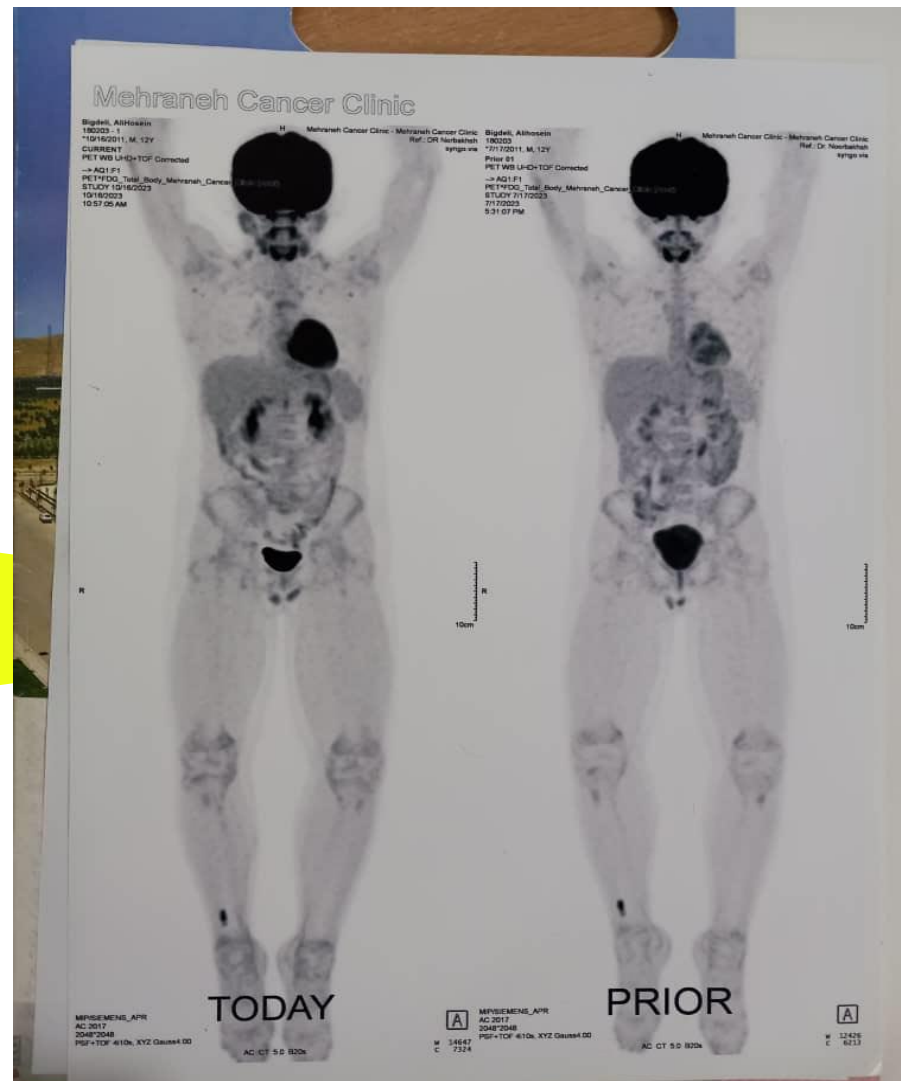
آدرس: زنجان، بلوار پروفنور بوقی، بلوار مهران، کلینیک تخصصی سرطان  
تلفن: ۰۲۴-۳۳۰۶۱۱۱







# Mehraneh Cancer Clinic





# ***Treatment***

***Neoadjuvant chemo (VDC/IE, 6 cycles) → partial response***

***Relapse after 16 cycles → new mandibular + sphenoid lesions***

***Salvage therapy:***

***Irinotecan + Temozolomide + Nivolumab***

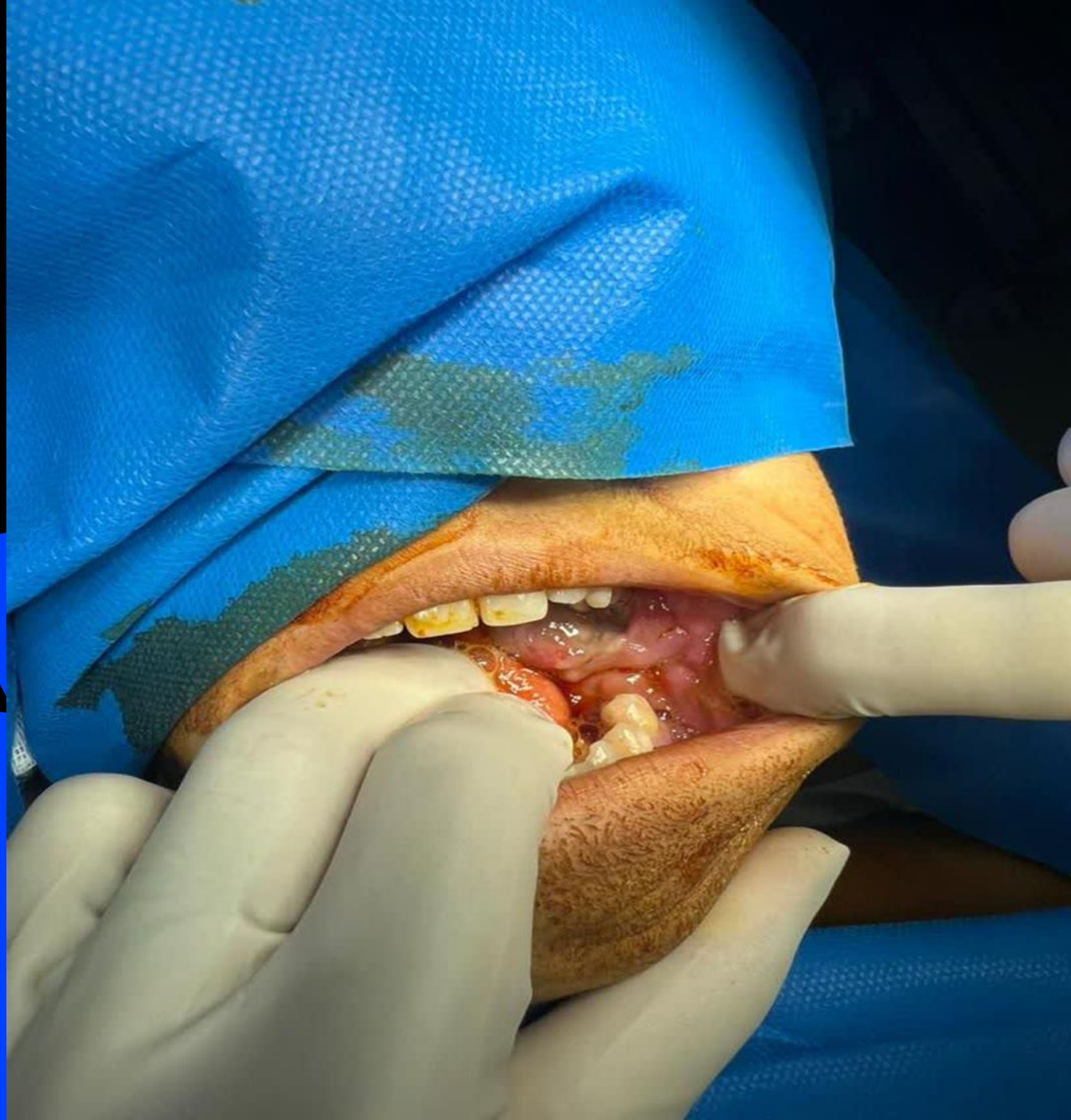
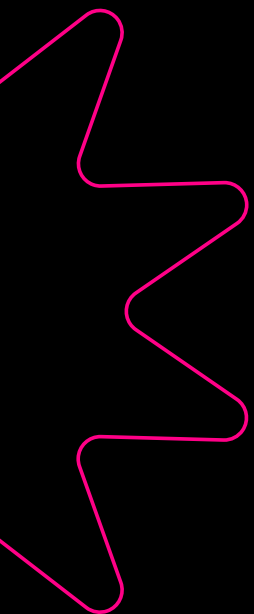
***Radiotherapy: 33 sessions → near complete response***

***Surgery: Mandibulectomy (2025)***





The power of  
communication









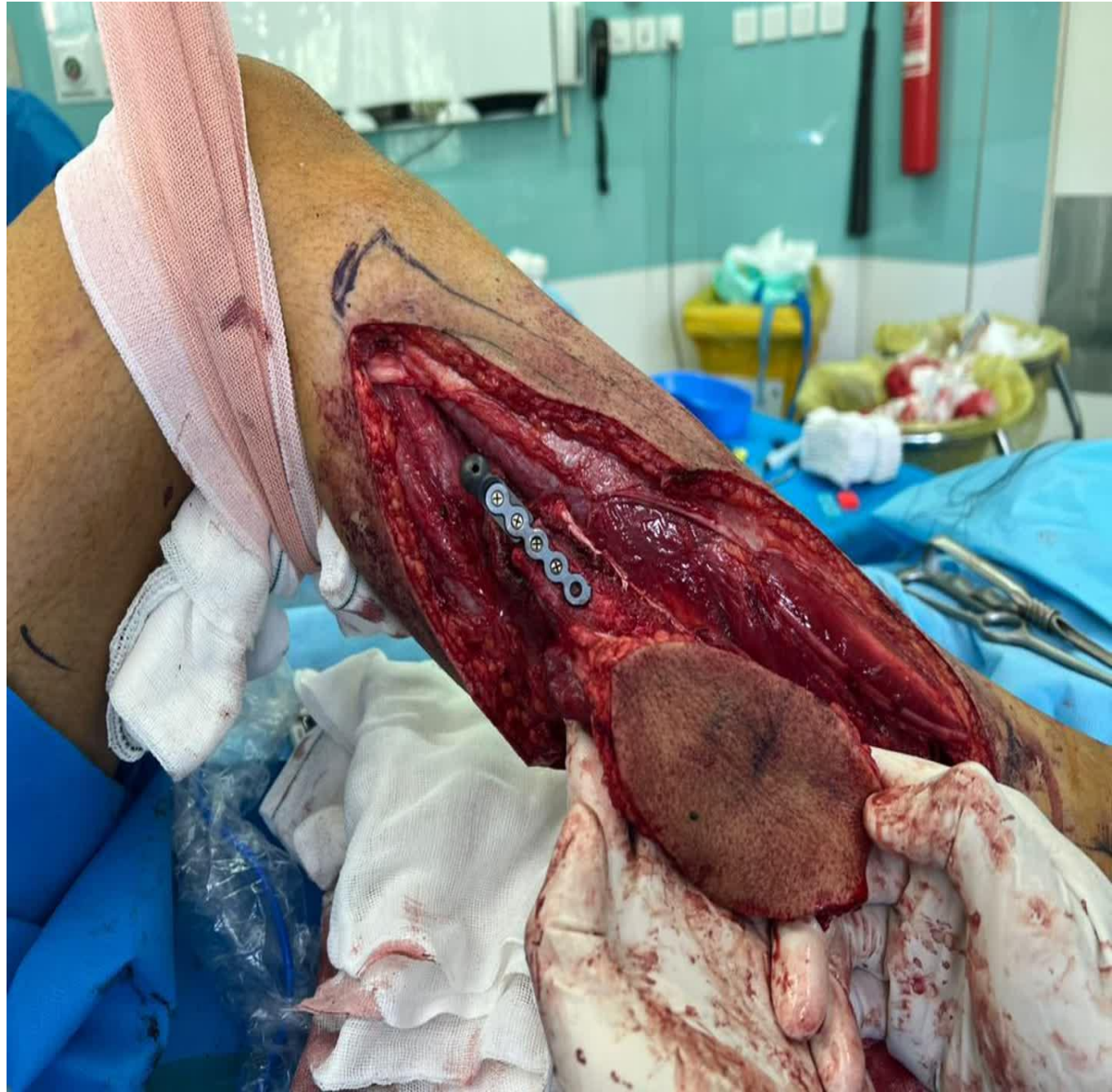


























دکتر محمد شیرخدا

Dr Mohammad Shirkhoda

دانشیار جراحی سرطان

گروه جراحی عمومی  
دانشکده پزشکی

انستیتو کانسر

مرکز تحقیقات سرطان

پژوهشکده سرطان

دانشگاه علوم پزشکی تهران



# PATHOLOGY REPORT SHEET

شماره پرونده: ۰۱-۶۹-۳۵-۳۱		شماره پاتولوژی: S-۰۴-۱۰۷۳۹	
نام خانوادگی:	نام:	کد پذیرش:	پزشک معالج:
بیگدلی	علی حسین	۱۶۰۹۸۱۵۸	بدون - پزشک
نام پدر:	جنسیت:	سن:	بخش ارجاع:
علی	مرد	۱۴	بخش جراحی ۱ و ۲ مردان کانسر
			تاریخ جوابدهی:
			۱۴۰۴/۰۵/۲۲
			تاریخ پذیرش:
			۱۴۰۴/۰۵/۰۴

## Clinical Data:

A 13-year-old boy known case of Ewing sarcoma (please see our pathology report No#S-02-23450)

## Macroscopic Description:

The specimens are received in two containers as follows:

A) Received in fresh state for intraoperative consultation, labeled as "Radical mandibulectomy", consists of a piece of mandibular bone measuring 6.5x3 cm infiltrated by a mass measuring 7x6x6 cm. On cut sections, the tumor is tan-colored, nodular and necrotic, and the mandibular bone is destructed. Distance of tumor from margins: lateral mucosal margin: 0.7 cm, masseter margin 0.2 cm, posterior mucosal margin: 0.6 cm, pterygoid margin: 1 cm, buccinator margin: 0.6 cm  
Representative sections submitted in 9 blocks:

Lateral mucosal margin: AF1, posterior mucosal margin: AF2, pterygoid margin: AF3, masseter muscle margin: AF4, buccinator muscle margin: AF5, tumor: A6-A9

B) Received in fresh state for intraoperative consultation, labeled as "masseter muscle margin", consists of two pieces of fibrofatty tissue totally measuring 3x2.5x0.7 cm.  
Submitted in toto in four blocks: BF1-BF4

## Frozen Section Description:

- A) Masseter muscle margin is involved by tumor. Other surgical margins are free from tumor
- B) Free from tumor

## Diagnosis:

- A) "Mandibular mass", radical mandibulectomy:
  - Histologic type: Residual small round cell sarcoma (please see our pathology report No#S-02-23450)
  - Tumor location and extent: Mandible
  - Tumor size: 7x6x6 cm
  - Mitotic rate: 13-14/mm<sup>2</sup>
  - Necrosis: Present (50%)
  - Margins: Masseter margin is involved by tumor; other surgical margins are free from tumor (the first masseter muscle margin in frozen section was involved by tumor but the second masseter muscle margin in second container is free from tumor)
  - Lymphovascular invasion: Not identified
  - Regional lymph nodes: Not identified
  - Treatment effect: Not applicable
  - Mandibular bone margin: free from tumor
- B) "Masseter margin", re-excision:
  - Free from tumor

دستیار: دکتر مریم بهادری



پاتولوژیست: دکتر صفار هانا





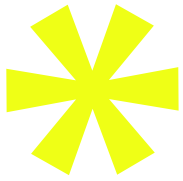


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حسن توجه شما







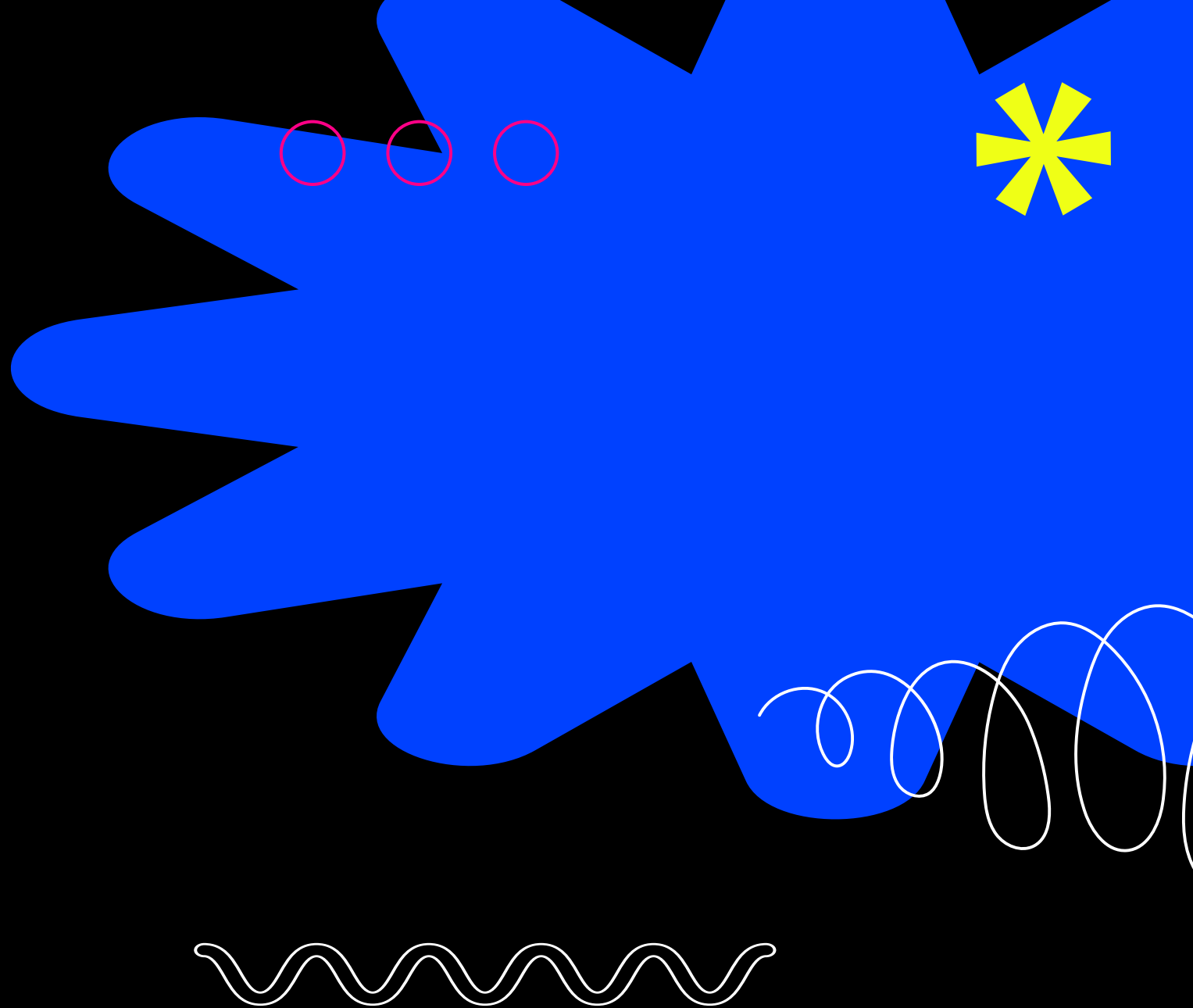
# Engaging the audience

## Techniques for connecting

- Make eye contact with your audience to create a sense of intimacy and involvement
- Weave relatable stories into your presentation using narratives that make your message memorable and impactful
- Encourage questions and provide thoughtful responses to enhance audience participation
- Use live polls or surveys to gather audience opinions, promoting engagement and making sure the audience feel involved

# Selecting visual aids

Enhancing your presentation



# Effective delivery techniques

## Voice modulation

This is a powerful tool in public speaking. It involves varying pitch, tone, and volume to convey emotion, emphasize points, and maintain interest.

- Pitch variation
- Tone inflection
- Volume control



## Body language

Effective body language enhances your message, making it more impactful and memorable.

- Meaningful eye contact
- Purposeful gestures
- Maintain good posture
- Control your expressions

# Navigating Q&A sessions

## Preparing for questions

1. Know your material in advance
2. Anticipate common questions
3. Rehearse your responses

## Maintaining composure

Maintaining composure during the Q&A session is essential for projecting confidence and authority. Consider the following tips for staying composed:

- Stay calm
- Actively listen
- Pause and reflect
- Maintain eye contact

# Speaking impact

Your ability to communicate effectively will leave a lasting impact on your audience

Effectively communicating involves not only delivering a message but also resonating with the experiences, values, and emotions of those listening



# Dynamic delivery

Learn to infuse energy into your delivery to leave a lasting impression

One of the goals of effective communication is to motivate your audience

Metric	Measurement	Target	Actual
Audience attendance	# of attendees	150	120
Engagement duration	Minutes	60	75
Q&A interaction	# of questions	10	15
Positive feedback	Percentage (%)	90	95
Rate of information retention	Percentage (%)	80	85



# Final tips & takeaways

## Preparing for questions

- Consistent rehearsal
  - Strengthen your familiarity
- Refine delivery style
  - Pacing, tone, and emphasis
- Timing and transitions
  - Aim for seamless, professional delivery
- Practice audience
  - Enlist colleagues to listen & provide feedback

## Continue improving

Seek feedback  
Reflect on performance  
Explore new techniques  
Set personal goals  
Iterate and adapt

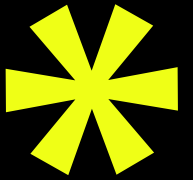
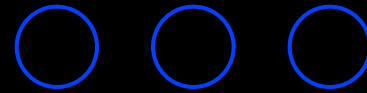


# Speaking engagement metrics

Impact factor	Measurement	Target	Achieved
Audience interaction	Percentage (%)	85	88
Knowledge retention	Percentage (%)	75	80
Post-presentation surveys	Average rating	4.2	4.5
Referral rate	Percentage (%)	10	12
Collaboration opportunities	# of opportunities	8	10



# Thank you



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