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4rd Scientific Day of the Cancer Radiotherapy Department, Farhet Hached University Hospital, Sousse, Tunisia, 11 April 2026

Conferences

1. Hypofractionated Radiotherapy in Prostate Cancer: Current Updates

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Abstract:
This conference focused on the evolving role of hypofractionated radiotherapy in the management of prostate cancer, a major public health concern worldwide. The presentation highlighted the rationale for hypofractionation, based on the radiobiological characteristics of prostate tumors, which support the use of larger doses per fraction to improve treatment efficacy.The main objective was to review current evidence on moderate and ultra-hypofractionated radiotherapy, including stereotactic body radiotherapy (SBRT), in terms of efficacy, safety, and practicality. Key clinical trials and recent data were discussed, demonstrating that hypofractionated regimens achieve comparable oncological outcomes to conventional fractionation, with acceptable toxicity profiles.Particular attention was given to treatment convenience, reduced overall treatment time, and resource optimization, which are especially relevant in high-demand healthcare settings. The conference also addressed technical requirements, patient selection, and the importance of image-guided radiotherapy to ensure precision and minimize adverse effects.
In conclusion, hypofractionated radiotherapy represents a validated and increasingly adopted standard of care in prostate cancer treatment. Ongoing research and longer follow-up are needed to further assess long-term outcomes and refine treatment protocols, but current evidence supports its broader implementation in clinical practice.

2. Management of Sexual Dysfunctions After Prostate Cancer Treatment: From Pathophysiology to Sexual Rehabilitation

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Abstract:
Prostate cancer is one of the most common malignancies in men and is associated with excellent survival rates, particularly in localized disease. As a result, an increasing number of survivors experience long-term treatment-related sequelae, among which sexual dysfunction represents a major yet frequently underreported burden. Erectile dysfunction is the most prevalent and best-documented sexual disorder after prostate cancer treatment, but other alterations, including decreased libido, anejaculation, orgasmic changes, altered body image, and couple distress, are also common.
The type, timing, and severity of sexual dysfunction vary according to treatment modality. Radical prostatectomy is typically associated with early erectile impairment, mainly related to neurovascular injury, whereas radiotherapy leads to more progressive dysfunction through combined vascular, neural, and cavernous tissue damage. Androgen deprivation therapy has a profound impact on libido, sexual confidence, erectile quality, body image, and overall psychosexual well-being. Multimodal treatment strategies and advanced disease stages are generally associated with more severe and cumulative sexual consequences.
Sexual rehabilitation should therefore be integrated into the prostate cancer care pathway. A structured approach begins with pre-treatment assessment of baseline sexual function, preferably using validated tools such as the IIEF-5, together with patient and partner counselling. Early post-treatment management includes education, lifestyle optimization, phosphodiesterase type 5 inhibitors, vacuum erection devices, and psychosexual support. In cases of insufficient response, escalation to intracavernous injections or penile prosthesis may be considered, according to patient expectations, oncological status, and sexual goals.
Sexual health after prostate cancer treatment should not be limited to the restoration of erection. It requires a comprehensive, multidisciplinary, and couple-centered survivorship approach. Systematic screening, early counselling, realistic information, and timely therapeutic escalation are essential to reduce distress, preserve intimacy, and improve quality of life in prostate cancer survivors.

3. Molecular Genetics of Soft Tissue Sarcomas

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Abstract:
Soft tissue sarcomas (STS) designate various mesenchymal tissue cancers with overlapping histopathological characteristics which arises serious diagnostic, prognosis and therapeutic challenges.[1]STS are most commonly sporadic, with somatic (i.e.non heritable) genetic or epigenetic variations. Genetic testing enabled a tremendous progress in understanding the pathogeneses of these malignancies, their classification, and their treatment options. Historically, cytogenetics enabled the distinction between,simple and complexkaryotype sarcomas.[2] Recent developments of molecular genetic profiling, mainly the emerging next generation DNA and RNA sequencing strategies helped defining accurately STS classification for diagnostic purposes, identifying therapeutic targets, and evaluating prognosis. Simple genetics sarcomas occur more frequently in children, characterized by recurrent driver mutations (i.e. chromosome translocations seen in rhabdomyosarcomas (RMS), Ewing sarcoma (EWS),.. or proto-oncogene activating mutations found in gastrointestinal stromal tumours (GIST) or tumour suppressor gene inactivating sequence amplifications occurring in liposarcomas). To the opposite, complex genetics sarcomas result rather from non-recurrent passenger mutations, which explains the heterogeneous spectrum of genetic variations resulting in difficulties in the molecular diagnostic settings, and the drug design.[2]A special focus should be given to familial and syndromic sarcomas represent more than 5% of STS showing association with other tumours (Li-Fraumeni syndrome, Lynch Syndrome…) or congenital

malformations (Rothmund-Thomson II, Costello, Gorlin syndromes…).[3] These genetic predispositions in sarcomas are noteworthy to diagnose because they have clinical implications for the patient and his family (i.e. genetic counselling, preventive screening of mutation carriers…) and they are fundamental for understanding the tumour pathogenesis.

Future research should be oriented towards further validation of molecular genetic milestones for STS and the development of innovative therapies.

4. Soft Tissue Sarcomas: Update on Classification, Molecular Pathology, and Diagnostic Approach

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Abstract

Soft tissue sarcomas (STS) are a heterogeneous group of malignant mesenchymal neoplasms encompassing more than 100 histological subtypes with diverse clinical, morphological, and molecular characteristics. Over the past decade, advances in molecular pathology have profoundly transformed their classification, diagnosis, and management. The forthcoming WHO Classification of Tumours of Soft Tissue and Bone (6th edition) is expected to further emphasize a biologically driven taxonomy, integrating genetic alterations as defining diagnostic criteria.

Sarcomas are broadly categorized into tumors with simple genomics, characterized by specific recurrent genetic alterations such as gene fusions or activating mutations, and those with complex karyotypes exhibiting genomic instability. The identification of recurrent alterations, including EWSR1, SS18, BCOR, CIC, and NTRK rearrangements, has significantly improved diagnostic precision and enabled the development of targeted therapies. Next-generation sequencing (NGS) has become a central tool in routine diagnostics, allowing comprehensive molecular profiling.

Accurate diagnosis relies on an integrated approach combining clinical, radiological, histopathological, immunohistochemical, and molecular data. Image-guided core needle biopsy remains the preferred diagnostic technique, ensuring adequate tissue for ancillary studies. Immunohistochemistry continues to play a pivotal role, particularly through the use of surrogate markers of molecular alterations, although its limitations necessitate molecular confirmation.

This review provides an updated overview of STS classification, highlights recent molecular advances, and outlines practical recommendations for biopsy and immunohistochemical strategies within a modern integrated diagnostic framework.

Introduction

Soft tissue sarcomas (STS) are rare malignant tumors of mesenchymal origin, accounting for less than 1% of adult cancers but representing a significant diagnostic and therapeutic challenge due to their marked heterogeneity. They may arise at any anatomical site and affect all age groups, with substantial variability in clinical presentation, biological behavior, and prognosis.

Historically, STS classification relied predominantly on morphological features and presumed lines of differentiation. However, this approach has limitations, particularly in poorly differentiated neoplasms and tumors with overlapping histological features. The integration of molecular genetics into diagnostic pathology has revolutionized the field, allowing for more precise classification, improved reproducibility, and better correlation with clinical outcomes.[1].

The WHO Classification of Tumours of Soft Tissue and Bone (5th edition, 2020) marked a significant step toward a combined histomolecular classification. The anticipated 6th edition is expected to further refine this approach by incorporating molecular alterations as central defining features of many tumor entities.[2, 3]

This review aims to provide a comprehensive update on STS classification, focusing on emerging molecular concepts, and to discuss current recommendations regarding biopsy techniques and immunohistochemical strategies within an integrated diagnostic framework.

Evolution of Classification Toward WHO 6th Edition:

The classification of soft tissue sarcomas has evolved from a purely morphological system to an integrated model combining histology, immunophenotype, and molecular genetics. This transition reflects the recognition that many sarcomas are defined by specific genetic alterations that drive tumorigenesis and determine biological behavior.A fundamental concept in modern classification is the distinction between sarcomas with simple genomics, characterized by specific, recurrent genetic events and sarcomas with complex genomics, exhibiting multiple chromosomal abnormalities and genomic instability. This dichotomy provides a biologically meaningful framework that is expected to be reinforced in the WHO 6th edition.

An increasing number of sarcomas are now defined by specific genetic alterations, particularly gene fusions: Ewing sarcoma (EWSR1-ETS fusions), Synovial sarcoma (SS18-SSX fusions), Myxoid liposarcoma (FUS-DDIT3 fusion).[2]

Recent advances have led to the recognition of additional entities, including:CIC-rearranged sarcomas, BCOR-altered sarcomas, NTRK-rearranged spindle cell neoplasms.

These entities often display overlapping morphology but distinct molecular profiles and clinical behavior, highlighting the importance of molecular diagnostics.

The category of undifferentiated sarcomas has historically served as a “wastebasket” for tumors lacking clear differentiation. However, advances in molecular pathology are progressively reducing this category by enabling reclassification into defined molecular subtypes.The WHO 6th edition is expected to further decrease the proportion of unclassified sarcomas through the incorporation of advanced molecular techniques.[4]

Molecular and Genetic Advances:

Soft tissue sarcomas can be broadly divided into three molecular groups:

Gene Fusion–Driven Sarcomasare characterized by specific chromosomal translocations resulting in oncogenic fusion genes. They typically exhibit relatively simple genomes.Fusion genes act as transcriptional regulators or signaling activators, driving tumorigenesis.[5]

Mutation-Driven Sarcomas: Some sarcomas are characterized by recurrent activating mutations.These alterations may represent actionable therapeutic targets.[6]

Complex Genomic Sarcomas: These tumors exhibit numerous chromosomal gains, losses, and rearrangements.They lack a single defining genetic alteration and are often associated with aggressive clinical behavior.[7]

Immunohistochemical Approach:

Immunohistochemistry (IHC) is an essential component of sarcoma diagnosis, particularly for determining lineage differentiation, narrowing differential diagnoses and guiding molecular testing. Certain IHC markers serve as surrogates for genetic alterations like STAT6 (solitary fibrous tumor), MUC4 (low-grade fibromyxoid sarcoma) and Pan-TRK (NTRK fusions).[6]

Thus, IHC must always be interpreted in conjunction with morphology and molecular findings (figure 1).

Clinical Implications:

Molecular characterization has direct clinical implications: improved diagnostic accuracy prognostic stratification and identification of therapeutic targets.[8]

From a clinical perspective, these molecular advances have direct therapeutic implications. The identification of specific alterations, such as *NTRK* fusions or kinase-activating mutations, has paved the way for targeted therapies, significantly improving outcomes in selected patient subsets. Consequently, accurate molecular characterization is no longer optional but represents an essential component of patient management.[9, 10]

Biopsy Strategy and Technical Considerations:

Biopsy is a critical step in the diagnosis of soft tissue sarcomas and must be carefully planned to ensure adequate tissue sampling while minimizing complications.

Image-guided core needle biopsy is the preferred technique due to

high diagnostic accuracy, low morbidity and ability to obtain multiple tissue cores. At least 3–4 cores should be obtained, targeting viable tumor areas and avoiding necrosis.[11, 12]
Alternative Techniques include incisional biopsy, used for deep or large tumors and excisional biopsy, reserved for small, superficial lesions.
Biopsy tract should be planned for future surgical excision and adequate tissue must be obtained for histology, immunohistochemistry and molecular studies.[13, 14, 15]
International guidelines, including recent updates from expert groups, stress the importance of an integrated diagnostic approach combining clinical, radiological, histological, immunophenotypic, and molecular data [13, 14]. This multidisciplinary strategy is essential not only for accurate classification but also for optimal therapeutic decision-making.
Conclusion:
The classification and diagnosis of soft tissue sarcomas are undergoing a major transformation driven by advances in molecular pathology. The WHO 6th edition is expected to formalize a classification system in which genetic alterations play a central role. An integrated diagnostic approach combining high-quality biopsy, immunohistochemistry, and molecular techniques is essential for accurate classification and optimal patient management. Continued advances in molecular technologies and targeted therapies promise to further improve outcomes for patients with these challenging tumors.

5. Systemictherapy for soft tissue sarcoma

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Soft tissue sarcomaSTS,group of neoplasms of mesenchymalorigin, represent 1% of all malignanttumours in the adultagewith more than 100 differenthistologicsubtypes. It can occur in anyregion of the body wichmakesitdifficult to standardize the therapeutic options.
Management of local disease located in the extremities and trunk wall : Is there a place for adjuvant systemic treatment in localized operable tumors ?
Surgery is the mainstay of treatment for localized disease. The standard procedure recommended is in bloc resection of tumour (macroscopic complete resection) .Unplanned excision is not recommended.Radiotherapy should be added to surgery in high grade lesions (G2-G3) .
Over 20 randomized trials and twometa-analyses have addressed the potentialbenefit of adjuvant chemotherapy for resectedextremity STS in adults. Unfortunately, these have yieldedconflicting data, and as a result, the benefit of adjuvant chemotherapy ChTremainsuncertain. Patients with extremity and trunk wall STS in the EORTC-STBSG 62931 RCT were analysed (N Z 290/351). Ten-year predicted probability of over all survival (pr-OS) was calculate dusing the prognostic nomogram Sarculator. Patients were groupe dintothreecategories of predicte dpr-OS: high (pr-OS>66%), intermediate (51<pr-OS 66) and low (pr-OS 51%).OS and disease-free survival (DFS) were calculated.Patients withextremity and trunk wall STS and a lowpredictedpr-OS (high-risk patients) hadbetteroutcomeswhentreatedwithadjuvantchemotherapy. This may help reconcile the disparate results of clinicalstudies on adjuvant/neoadjuvantchemotherapy in STS.
Differentrisk classification criteria are used to select patients withlocalized soft tissue sarcoma of the extremities and trunkwall for neoadjuvant/adjuvant chemotherapy. The two most frequently use drisk classification methods are PERSARC and Sarculator prediction models.A high degree of agreement between PERSARC and Sarculatorpredictionswasobserved. Patients classified as high-risk by only one methodhadsimilaroutcomes to thosewhowere high-riskusingboth. Chemotherapywasassociatedwithimprovedoutcome in the PERSARC, Sarculator, and combined high-risk group. Patients classified as high-risk by one of thesemethodscouldbeconsidered for neoadjuvant/adjuvant chemotherapy.
In fit patients at high risk of death Adjuvant/neoadjuvant chemotherapy with Adriamycine If osfamide for at least three cycles can be proposed to patients at high risk of death Sarculator 10-year OS < 60%.It can be proposed ChT with Anthracycline/ifosfamide (may have RFS an OS benefit)
Management of Locally advanced/metastatic resectable disease
Abdominal CT scan and a bone scan or FDGePET are mandatory to confirm that lungmetastases are 'isolated'.A minimally invasive thoracoscopicapproach can beused in selected cases. ChT is preferably given be foresurgery to assesstumourresponse and modulatetreatment.
When lungmetastases are synchronous, in the absence of extrapulmonarydisease, standard treatmentisChT.
Surgery for resectableresiduallungmetastasesmaybeoffered as an option afterChT, especiallywhen a tumourresponseisachieved.
In case of isolatedlungmetastases, other local treatmentsuch as stereo-ablative RT, mayalsobeconsidered
Management of Locally advanced/metastatic non resectable disease
Pulmonary non-resectable disease and extra pulmonarymetastatic disease are treated with ChT as the standard of care .Surgery or stereo-ablative RT of extrapulmonarymetastaseswithoutChTmaybe an option in selected cases.
Anthracycline base therapyis the standard first line treatment
Association Anthracycline + others chemotherapy?
Multi-agent ChT with adequate-dose AI maybe the treatment of choice, particularly in histological types sensitive to ifosfamide, when a tumourres ponseisfelt to be potentially advantageous and patient performance status (PS) is good. Gemcitabine-docetaxelis not generally recommended as a first-line therapy for advanced STS patients. Imatinib is standard medical therapy for patients with DFSP. NTRK inhibitors are standard treatment of patients with advanced NTRK-rearrangedsarcomas. They can beconsideredalso in the preoperative setting, when a cytoreduction can improvemorbidity and function. Trabectedinis an option in advanced STS in second and furtherlines of treatment. Pazopanibis an option in non-adipogenic STS in second and further lines of treatment. Eribulinisan optionin patients with liposarcomas. The combination of dacarbazine-gemcitabine or gemcitabine-docetaxelis an option in doxorubicin pretreated patients.
Patients who have already received ChT maybe treated with ifosfamide if they did not progress on itpreviously. High-dose ifosfamide. Trabectedinis an option in advanced STS in second and further lines of treatment. It has proved effective in LMS and liposarcoma. Comprehension of molecular STS profiling revealed target able events that may benefit for future the rapeutic developpement

Conclusion
Management of STS should be carried out in sarcoma reference centres. Decisions must be taken at Multidisciplinary Tumour Board Meetings with Networks connecting group and institutions. Volume and critical mass are paramount for research and development of noveltherapeutic options

Abstracts

Sarcomas

1. Late diagnosis of soft tissue sarcomas: medico-legal issues

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Introduction:
Soft tissue sarcomas are a heterogeneous group of rare malignant tumors, accounting for less than 1% of cancers in adults. Their initial clinical presentation is often nonspecific, most commonly as a painless, progressive soft-tissue mass, frequently mistaken for benign lesions such as lipomas, cysts, or hematomas.
This clinical similarity exposes patients to the risk of delayed diagnosis. In this context, the issue of delayed diagnosis raises important medico-

legal concerns, particularly regarding the patient's loss of opportunity.
Methods:
A literature review on this topic was conducted, supplemented by an analysis of the medico-legal principles applicable in Tunisia about medical liability, particularly in light of physicians' obligations in terms of diagnostic and referral to specialized facilities.
Results:
The main factors identified as contributing to delayed diagnosis include the clinical trivialization of soft tissue masses, the lack of early use of appropriate imaging, the failure to perform a biopsy before excision, and the lack of referral to a center specializing in oncology or sarcoma surgery. The literature shows that an increase in tumor volume is associated with an increased risk of local recurrence, metastasis, and the need for more aggressive treatments. From a medico-legal perspective, the assessment of loss of opportunity is based on an analysis of the delay in treatment, tumor progression during this delay, and the available diagnostic recommendations.
Conclusion:
In the Tunisian context, early recognition of the warning signs of sarcomas and rapid referral to specialized facilities are essential for reducing diagnostic delays and preventing medico-legal disputes related to loss of therapeutic opportunity.

2. Intraperitoneal Round Cell Myxoid Liposarcoma Masquerading as a Gastrointestinal Stromal Tumor: A Diagnostic Challenge

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Introduction:
Round cellmyxoidlipo sarcomas are rare soft tissue sarcomas that are typically located in the extremities. Intra-abdominal forms are exceptional and may radiologically mimi cother digestive mesenchymaltumors, particularly gastrointestinal stromal tumors (GIST).
Case Presentation:
A 65-year-old patient with a history of type 2 diabetes and dyslipidemia presented with abdominal pain associated with progressive abdominal distension. On examination, the patient was hemodynamically stable, and a palpable epigastric mass measure in gapproximately 4 cm was noted. Abdominal ultra sound followed by thoraco-abdomino-pelvic computed tomography revealed an intraperitoneal mass measuring approximately 55mm, with irregular margins and heterogeneous density containing large areas of necrosis, displacing the stomach and the transverse colon. The imagin gappearance was highly suggestive of a gastrointestinal stromal tumor (GIST), although no definite digestive origin was identified. Upper gastrointestinal endoscopy showed compression of the posterior gastric wall with normal mucosa; biopsies were negative. Given the strong suspicion of a resectable GIST, surgical excision was performed. Histological examination revealed a poorly differentiated mesenchy mal proliferation composed of round and spind lecells with 8 mitoses per 10 high-power fields and limited tumornecrosis. Immuno histochemistry demonstrated diffuse positivity for S100 protein and focal positivity for CD117, while other markers were negative. The final diagnosis was grade 2 round cell myxoidliposarcoma according to the FNCLCC classification.
Despite adjuvant chemotherapy, the clinical course was marked by the development of hepaticmetastases and the patient died eight months after surgery.
Despite adjuvant chemotherapy, the clinical course was marked by the development of hepatic metastases and the patient died eight months after surgery.
Conclusion:
This case highlights the diagnostic challenge posed by intra-abdominal mesenchymal masses that maymimic a GIST. Histological and immunohistochemical analyses remain essential for establishing the diagnosis. Recognition of these atypical presentations of lipo sarcomais crucial for guiding appropriate therapeutic management and prognostic cassessment.

3. Confusing myxofibrosarcoma of the left atrium, firstly diagnosed as myxoma on biopsy

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Introduction:
Primary cardiac tumors are rare, with an incidence ranging from 0.3% to 0.7%. Despite their usually benign nature, a sound pathological interpretation is crucial to identify malignancy. The diagnosis may be challenging, particulary on small biopsy.
Methods
The patient, a 32-year-old man, developed signs of dyspnea two months after COVID-19 infection. Computed tomography revealed a left atrial tumor, resection of the tumor was performed.
Results:
In gross, the received specimen was cramped and of gelatinous texture. Microscopic examination showed abundant myxoid stroma with few non atypical cells, so the diagnosis of myxoma was performed. Results Six months later, The patient developed left chest pain. Cardiac MRI confirmed tumor recurrence. Meticulous microscopic examination of pathology slides revealed hypercellular area with atypical spindel cells, showing moderate atypia with hyperchromasia and mitosis figure. the stroma was myxoid and abundant. On immunohistochemestry study, tumor cells were focally positive with SMA and CD34, and were negative for myogenic markers, MUC4, PS100 and cytokeratin. Considering the malignancy signs and the immunohistochemestry profile, the diagnosis was rectified for myxofibrosarcoma.
Conclusion
Myxoid tumor are diagnosis challenging lesion, an expanded sampling, a meticulous microscopic examination and an appropriate immunohistochemical study are crucial to avoid wrong diagnosis.

4. Head and Neck Sarcomas: Rare Tumors of a Specific Anatomical Site

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Introduction:
Squamous cell carcinomas are the most common tumors of the head and neck region, whereas sarcomas are rare, accounting for approximately 2–15% of all sarcomas and about 1% of head and neck malignancies. These sarcomas are classified according to their tissue of origin (bone or soft tissue), histological grade (low or high), and anatomical subsite. They pose significant diagnostic and classification challenges, as many lack identifiable differentiation on immunohistochemistry and are therefore categorized as undifferentiated sarcomas. Furthermore, surgical management is particularly challenging due to the proximity to critical anatomical structures, often resulting in inadequate resection margins, high locoregional recurrence rates, and poor overall survival.
Methods:
This is a retrospective descriptive study including 14 cases of primary head and neck sarcomas recorded in the regional cancer registry of Central Tunisia over a 14-year period, from January 2008 to January 2022.
Results:
Among the 14 cases analyzed, 12 occurred in adults and 2 in children. Patient age ranged from 12 to 87 years, with a mean age of 51.2 years. A slight male predominance was observed, with a male-to-femaleratio of 1.16.
The most commonly affected sites included the maxillary bone, tonsil, and lips (42.8%), followed by the oral cavity (14.2%). Other sites included the palate, parotid gland, mandible, piriform sinus, and pharyngoesophageal region, each represented by a single case. The most frequent histological subtype in adults was Kaposi sarcoma, accounting for 5 cases (35.7%). Pediatric cases included

rhabdomyosarcoma and synovial sarcoma. Other histological types, each represented by a single case, included leiomyosarcoma, high-grade carcinosarcoma, grade III undifferentiated sarcoma, chondrosarcoma, high-grade my ofibro blastic sarcoma, and low-grade my ofibroblastic sarcoma.
Immunohistochemical analysis confirmed the diagnosis in 78.5% of cases. One patient had a prior history of radiotherapy for nasopharyngeal carcinoma and developed leiomyosarcoma within one year.
Following surgical treatment, 6 patients developed recurrence within two years.
Conclusion
The epidemiological data from this study indicate that Kaposi sarcoma and synovial sarcoma together represent the majority of head and neck sarcomas. In agreement with the literature, local recurrence after tumor resection occurs in approximately 50% of cases, particularly within the first two years. Given the difficulty of achieving complete surgical resection and the high risk of recurrence, more precise histopathological classification and the use of multimodal therapeutic approaches are essential to improve overall survival.

5. Primary pulmonary synovial sarcoma: A Rare Primary Pulmonary Tumor

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Introduction:
Synovial sarcoma (SS) in pleuropulmonary parenchyma is a rare primary site accounting for < 5% of all lung's tumors. The diagnosis of pulmonary SS is difficult for clinicians and pathologists because of the rare nature of the tumor and the broad of differential diagnosis.
We report this case with the goal of decreasing misdiagnosis and highlighting the utility of immunohistochemistry, as well as a molecular testing at this uncommon site.
Methods:
We report a case of a 77-year-old male, who complained of right-sided chest pain. Computed tomography revealed a large heterogeneous mass in the right upper lobe. Biopsy were performed, revealed dense fascicles of monomorphic spindle cell with variable epithelial differentiation without identification of any glandular component or squamous metaplasia. Standard immunohistochemical (IHC) studies showed diffuse nuclear immunoreactivity with TLE1 and membranous staining for pancytokeratin. The index of Ki-67 was 40%. In conclusion the diagnosis was biphasic primary pulmonary SS.
Results:
SS is a spindle cell tumor of mesenchymal origin with variable epithelial differentiations, characterized by a pathognomonic chromosomal translocation t(X; 18)(p11;q11).
SS usually occurs in deep soft tissue of extremities, however, any anatomic site can be affected.
The diagnosis of primary pulmonary SS requires clinical, radiological, pathological, and immunohistochemical investigations to exclude alternative primary tumors and metastatic sarcoma.
The tumors were classified into monophasic, biphasic, and poorly differentiated types according to the criteria proposed by the World Health Organization
The otherwise variable histologic features observed, the differential diagnosis may be quite broad. This is compounded by the wide variety of neoplasms that can occur in the lung. The differential diagnosis includes other keratin-positive spindle cell or biphasic neoplasms [sarcomatoid carcinoma, mesothelioma, thymoma, spindle epithelial tumor with thymus-like differentiation (SETTLE)], as well as other monomorphic spindle cell neoplasms [malignant peripheral nerve sheath tumor (MPNST) and solitary fibrous tumor (SFT)]. If poorly differentiated, the morphology may also overlap with Ewing sarcoma. Therefore, IHC is essential for arriving at a definitive diagnosis.
Recently, IHC labelling for TLE1 protein has been invoked for the diagnosis of SS.In this case, TLE seems useful as a diagnostic indicator for SS showed a intense and diffuse positivity.
There is a consensus that molecular detection of SYT-SSX is required for reliable diagnosis or exclusion of pulmonary synovial sarcoma. It is particularly useful to confirm the diagnosis when dealing with monophasic tumors, small biopsies, or unusual primary sites.
In this context, the report of pulmonary SS were based upon the histological appearances and IHC studies, without recourse molecular analysis because this procedure wasn't available.
Conclusion:
We present the pathology features of primary pulmonary SS. These tumors seem to be more aggressive than the soft tissue counterparts and more aggressive. Extensive surgical resection of the tumor and more effective adjuvant therapy should be advocated. The diagnosis of primary pulmonary SS might be challenging. A combination of clinical studies, careful morphologic analysis, and a full panel of immunomarkers including TLE1 and genetic studies is helpful in confirming the diagnosis.

Prostate

1. Patient-Reported Quality of Life Following External Beam Radiotherapy for Localized Prostate Cancer: A Single-Center Experience

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Introduction:
Radiotherapyis a standard treatment for localized and locally advanced prostate cancer but maybe associated with urinary, gastrointestinal, and sexual toxicities that can affect patients' quality of life. The assessment of patient-reported out come sistherefore essential in treatment follow-up. The aim of thisstudywas to evaluate the quality of life of patients treated with radio therapy for prostate cancer using a dedicated questionnaire developed in our department, combined with the validated International Prostate Symptom Score (IPSS).
Materials and Methods:
We conducted a retrospective descriptive single-center study including patients treated with external beam radiotherapy for prostate cancer at the Department of Radiation Oncology of the Jendouba Regional Cancer Center between 2020 and 2025. Clinical, pathological, and treatment-related data were collected from medical records.Quality of life was assessed using a dedicated questionnaire developed in our department exploring urinary, gastrointestinal, sexual, and global health domains, combined with the validated International Prostate Symptom Score (IPSS) for the evaluation of urinary symptoms. A descriptive statistical analysis was performed to assess post-treatment quality of life.
Results:
A total of 30 patients were included in the study. The median age was 67 years (range: 57–79). According to the prognostic classification proposed by Anthony V. D'Amico, 26.7% of patients were classified as very high risk and 43.3% as high risk. All patients received external beam radiotherapy with a median total dose of 76 Gy delivered in conventional fractionation using the VMAT technique. Androgen deprivation therapy was administered in 93.3% of patients. The median follow-up was 18 months. Assessment of urinary symptoms according to the International Prostate Symptom Score (IPSS) showed mild symptoms in 46.7% of patients and moderate symptoms in 53.3%, with no severe symptoms reported. Acute gastrointestinal and sexual toxicities were observed in 36.7% and 6.7% of patients, respectively. Overall, 93.3% of patients reported satisfactory quality of life after treatment.
Conclusion:
External beam radiotherapy for prostate cancer appears to be well tolerated overall, with satisfactory quality of life in the majority of patients. Systematic assessment of patient-reported outcomes using validated tools such as the International Prostate Symptom Score (IPSS)

provides valuable information on treatment impact and may help optimize patient follow-up and supportive care.

2. Overdiagnosis of prostate cancer:Ethical implications of PSA screening

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Introduction:
Prostate cancer screening using prostate-specificantigen (PSA) testing remains a subject of significantdebate in public health. Introduced in the 1990s, this test has led to a notable increase in the early diagnosis of prostate cancer. However, it has alsoled to an increase in cases of overdiagnosis, defined as the detection of indolent cancers that would probably never have compromised the patient'shealth or survival. This situation exposes some patients to potentially un necessary treatments, associated with significant complications such as urinary incontinence or erectiledys function. In this context, PSA screening raises major ethical questions related to the balance between expected benefits and iatrogenicrisks.
Methods:
A literaturereview was conducted on the benefits and limitations of PSA screening, as well as the associated thicaldebates. International screening guidelines were also examined to evaluate current approaches favoring shared medical decision-making.
Results:
The literature highlights thatsystematic PSA screening can lead to a significant proportion of overdiagnosis and unnecessarytherapeutic interventions. Curative treatments, such as radical prostatectomy or radiotherapy, can cause lasting adverse effects that affect patients' quality of life. From an ethicalstandpoint, this situation raises questions about the principle of non-maleficence, according to which physicians must avoid exposing patients to harmthatisdisproportionate to the expected benefit. Furthermore, respect for autonomyrequiresthat patients begiven clear and comprehensive information about the benefits, limitations, and uncertainties of screening.
Conclusion:
Given the risk of overdiagnosis, an approach based on informed consent and shared decision-making appears essential. PSA screening should be part of an individualized dialogue between the physician and the patient, allowing for a balance between potential benefits, respect for autonomy, and the prevention of unnecessary interventions.

Pulmonary stereotactic body radiotherapy

1. Stereotactic lung radiotherapy: Medical-legal issues of a high-precision technique

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Introduction:
Stereotactic lung radiotherapy (SLR) represents a major advance in the treatment of primary or metastatic lung tumors, particularly in inoperable patients. This technique involves administering very high doses of radiation in a limited number of fractions, with millimeter precision enabled by sophisticated imaging, dosimetry planning, and guidance systems. However, this high precision comes with a high degree of technological dependence and an extremely low margin for error. In this context, any technical or human failure can expose the patient to the risk of inadequate irradiation, raising specific medico-legal issues.
Methods:
We conducted a literature review on complications, technical incidents, and medico-legal aspects of SLr, supplemented by an analysis of the Tunisian legal framework relating to medical liability, in particular the obligations of safety and enhanced means.
Results:
The main medical-legal risks identified relate to tumor targeting errors, imaging guidance system failures, image fusion errors during planning, and radiotherapy equipment malfunctions. These incidents can result in insufficient irradiation of the tumor or, conversely, excessive irradiation of adjacent healthy tissue, exposing patients to potentially serious complications. From a medical-legal standpoint, determining liability involves a multidisciplinary analysis of the therapeutic decision-making chain, quality control procedures, traceability of technical parameters, and compliance with safety protocols.
Conclusion:
In the Tunisian context, the use of SLR requires rigorous supervision based on standardized protocols, adequate technological maintenance, and continuous training of teams. These measures are essential to reduce the risk of technical incidents and prevent medico-legal disputes related to this high-precision therapeutic modality.

2. Predictors of Tumor Relapse After Pulmonary SBRT: experience of Salah Azaiz Institute

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Introduction
Identifying factors that predict relapse after pulmonary SBRT is crucial for tailoring treatment strategies and determining follow-up. We evaluated univariate predictors of local, regional, and distant relapse in our institutional cohort.
Methods
A retrospective study was conducted of 27 patients treated with SBRT between 2019 and 2024. Relapse endpoints included local recurrence within the PTV, regional nodal failure, and distant metastasis. Candidate predictors comprised demographic, clinical, tumor, and treatment variables, with particular focus on planning target volume (PTV). Univariate analyses employed log-rank tests for time-to-event outcomes and chi-square/Fisher's exact tests for categorical relapse rates, with significance set at $p<0.05$.
Results
The cohort had a mean age of 67.7 years (range 19–86). Men represented 74% of patients, and 74% were current or former smokers, with a median tobacco exposure of 45 pack-years (IQR 40–52). Cardiovascular and metabolic comorbidities were frequent (hypertension 33%, diabetes 15%, coronary disease 22%), as were chronic respiratory conditions (COPD 56%, emphysema 33%). Most patients had favorable performance status (WHO PS 0–1 in 93%). Most patients received 60 Gy in 8 fractions. Local control at the irradiated site was 89%, with three local recurrences (median time 22 months). A PTV ≥ 37.8 cm³ was significantly associated with poorer outcomes with median overall survival 27.06 vs 42.8 months ($p=0.023$), median progression-free survival 19.94 vs 34 months ($p=0.010$), and median local recurrence-free survival 22.65 vs 38.96 months ($p=0.029$). No baseline demographic or comorbidity variables were significantly linked to relapse in univariate testing.
Conclusion
Larger PTV emerged as the main univariate predictor of relapse and reduced survival, likely reflecting higher tumor burden and greater exposure of normal tissue. These findings highlight the prognostic relevance of tumor volume and support efforts to minimize PTV when feasible, while considering intensified systemic or local strategies for patients with large target volumes. Validation in multicenter studies is warranted

Others

1. From implementation to practice : assessing setup accuracy in brainstereotactic radiotherapy

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Introduction
During the implementation phase of intracranial stereotactic radiotherapy (SRT), assessing setup accuracy is essential to ensure safe and precise dose delivery. Since the planning target volume (PTV) margindepends on systematic (Σ) and random (σ) setup errors, thisstudyaimed to assessour setup accuracy and evaluate whether current PTV margins are optimal.
Methods
This retrospectivestudy included all patients treated with intracranial SRT in our department (n=17). Patients were divided into two groups according to the prescribed dose: 27 Gy in 3 fractions and 30 Gy in 5 fractions. Patient immobilization was achieved using a three-point SRS-Fix thermoplastic mask. According to our institutional protocol, a 1 mm margin was applied from GTV to CTV and an additional 1 mm margin from CTV to PTV. Patient setup and daily corrections were performed using cone-beam CT (CBCT) with rigid image registration. Systematic (Σ) and random (σ) translational errors along the three principal axes were calculated. The optimal PTV margin (M) was derived using the Van Herk formula: $M = 2.5\Sigma + 0.7\sigma$. Rotational errors (pitch, roll, yaw) were also analyzed.
Results
The standard deviation of random inter fraction positioning errors ranged from 0.11 to 0.95 mm in the lateral axis, 0.09 to 0.14 mm in the craniocaudal axis, and 0.06 to 0.14 mm in the anteroposterior axis. The mean systematic (Σ) and random (σ) errors were 0.4 mm and 0.7 mm in the anteroposterior axis, 0.4 mm and 0.6 mm in the craniocaudal axis, and 0.4 mm and 0.6 mm in the lateral axis, respectively. Based on the Van Herk formula, the calculated PTV margins were 1.5 mm along the vertical (Z) axis and 1.42 mm along the longitudinal (Y) and lateral (X) axes. Mean rotational errors were 0.1°, 0.1°, and –0.1° for pitch, roll, and yaw, respectively.
Conclusion
All patients treated with intracranial SRT in our department demonstrated low translational and rotational setup errors. The calculated PTV margins were consistent with the current GTV–CTV and CTV–PTV margins defined in our institutional protocol.

2. Intracranial stereotactic radiotherapy in practice: insights from initial implementation

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Introduction
The Radiotherapy Department of Abderrahman Mami Hospital, operational since 2017, has recently implemented intracranial stereotactic radiotherapy (SRT) following the installation of a high-performance linearaccelerator. This achievem entrequired thorough preparation and close multidisciplinary coordination. The present report outlines the main steps of SRT integration with in our department and presents the preliminary clinical, technical, and organizational out comes from this initial experience.
Methods
A multidisciplinary team comprising radiation oncologist, medical physicist, and radiation therapist (RTT) received specialized training abroad to acquire the required expertise. The preparatory phase included equipment selection, drafting and validation of treatment procedures, and definition of inclusion criteria: good performance status (ECOG ≤2), up to three brain metastases measuring 8 mm to 4 cm, and controlled extracranial disease.
During the treatment phase, a rotation system wase stablished to involve all RTTs in treatment delivery, promoting progressive skill acquisition. At the end of this phase, a feedback questionnaire was distributed to assess their perceptions and experience.
Results
During the initial implementation phase, 62 SRT fractions weredelivered. The meantreatment time per fraction was 21,18 minutes [12,15–44,7]. No major technical incidents occurred. Early clinicaloutcomeswereencouraging, with good tolerance and no significant acute toxicity. RTTs' feedback showed a gradualincrease in confidence and proceduralproficiency.
Most participants (70%) reportedthat SRT related instructions wereclear and wellcommunicated. Ninety percent feltcomfortable performing image-guided positioning, while 50% expressed the need for additional training on patient immobilization systems. The clarity of protocols and multidisciplinary collaboration were the most positively rated aspects.
Conclusion
This initial experience highlights the importance of structured training, standardized procedures, and ongoing team support for the successful adoption of new radiotherapy techniques. Although the team achieved rapid skill development, continued practical training is required, particularly for patient immobilization. Based on these encouraging results, our department plans to gradually expand SRT indications while continuing to streng then professional development within the team.

3. Can a checklist empower radiation therapists for safer radiotherapy practice ?

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Introduction
Radiotherapy planning and delivery involve multiple complex steps and a multidisciplinary team, making the process susceptible to errors. Checklists have been recommended as a practical tool to standardize procedures, reduce mistakes, and improve coordination among healthcare professionals.
This study aimed to identify the most frequent errors encountered by radiation therapists (RTTs) and to evaluate the impact of implementing a checklist on treatment safety and professional practice.
Methods
A cross-sectional study was conducted in the radiotherapy department of Abderrahman Mami Hospital, between December 2024 and February 2025. Data were collected in two phases. First, a 15-item checklist in French, specifically designed for this study, was distributed to all RTTs after a brief training session on its use and importance for patient safety. Each item required a yes/no response and was completed and verified by RTTs before each new treatment. Second, a satisfaction questionnaire was administered to evaluate RTTs' experience, perceived effectiveness, impact on treatment safety, and suggestions for improvement.
Results
Among 78 initial treatments, 63 checklists were completed. The most frequent errors were missing patient photos in the electronic record (39%) and absence of 3D images on the technical sheet (31%). Other errors occurred in less than 6% of cases.
Regarding checklist usability, 80% of RTTs found it clear, and 67% reported that it integrated well into their workflow. Most RTTs (73%) required 1–5 minutes to complete the checklist.
In terms of impact, 53% of RTTs reported that the checklist improved their ability to detect incidents before treatment, and 60% indicated it enhanced communication and coordination within the team. During feedback meetings (CREX), 60% observed significant improvements, while 13% noted minor improvements. Overall satisfaction with the checklist was high, with 60% of RTTs being very satisfied or satisfied with its implementation.
Conclusion
This study highlighted the most frequent errors in the radiotherapy process and showed that implementing a checklist can improve error detection, enhance patient safety, and strengthen communication and coordination among RTTs and the multidisciplinary team.
The checklist was well accepted by RTTs and contributed to measurable improvements during feedback meetings, supporting its role as a

practical tool for quality and safety in radiotherapy practice.

4. Dosimetric Analysis of the Vulva During Radiotherapy for Cervical Cancer

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Introduction:
During pelvic radiotherapy for cervical cancer, the vulva may receive unintended radiation doses that can lead to skin and mucosal toxicities.This study aimed to evaluate the vulvar dose exposure and its correlation with the occurrence of radio epithelitis.
Methods:
A retrospective study was conducted including 40 non-metastatic patients treated for cervical cancer between 2023 and 2025 in the Radiotherapy Department of the Salah Azaïez Institute. The total prescribed dose ranged from 45 to 60 Gy. The vulva was retrospectively contoured as an organ at risk (OAR).
Dosimetric parameters analyzed included:
Dmean (mean dose): representing the average dose to the vulva,
Dmax (maximum dose): indicating the highest point dose received,
D2%: the dose received by the most exposed 2% of the vulvar volume,
V40Gy: the percentage of vulvar volume receiving ≥40 Gy.
Toxicities were graded according to CTCAE v5.0.
Results:
Median Dmax was 38.38 Gy [3.2–49.28], median Dmean 6.97 Gy [1–38.63], median D2% 27.1 Gy [2.87–48.06], and median V40Gy 5% [0–55%]. Radioepithelitis occurred in 50% grade 1, 35% grade 2, and 15% grade 3.
Conclusion:
The vulva receives a non-negligible radiation dose during pelvic irradiation for cervical cancer. Systematic vulvar contouring and optimized planning techniques may help minimize skin toxicity and improve patient tolerance.

5. Dosimetric Assessment of Temporal Muscles in Nasopharyngeal Carcinoma Treated with IMRT/VMAT

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Introduction:
Radiotherapy is the cornerstone of treatment for nasopharyngeal carcinoma (NPC). While organs at risk such as salivary glands are routinely evaluated, the temporal muscles remain largely overlooked despite their potential role in mastication and quality of life.
This study aimed to assess the radiation dose delivered to the temporal muscles in patients treated for NPC.
Methods:
This retrospective dosimetric study was conducted at the Salah Azaiez Institute in Tunis, Tunisia. Forty radiotherapy treatment plans of patients treated for nasopharyngeal carcinoma between January and December 2025 were analyzed.
All patients received definitive radiotherapy with a total dose of 70 Gy in 35 fractions to the primary tumor, along with 59.4 Gy to elective nodal volumes, using IMRT/VMAT techniques.
The right and left temporal muscles were systematically contoured for each plan. Dosimetric parameters collected included maximum dose (Dmax), mean dose (Dmean), and near-maximum dose (D2%).
Results:
For the right temporal muscle, the median Dmax was 63.77 Gy, D2% was 59.85 Gy, and Dmean was 21.9 Gy. For the left temporal muscle, the median Dmax was 64.38 Gy, D2% was 59.94 Gy, and Dmean was 19.54 Gy.
Overall, both temporal muscles received substantial high-dose exposure, particularly in terms of Dmax and D2%, reflecting their proximity to the target volumes.
Conclusion:
Temporal muscles are significantly exposed to high radiation doses during IMRT/VMAT for nasopharyngeal carcinoma, despite being often overlooked. Recognizing them as organs at risk could be key to preserving masticatory function and improving patients' quality of life.

6. Ethical Challenges in Disclosing a Cancer Diagnosis: Balancing the Right to information and Patient Protection

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Introduction:
Communicating a diagnosis of tumoral disease is a critical moment in oncological care. Beyond its clinical implications, it carries significant psychological consequences and raises ethical responsibilities. The disclosure process requires balancing the patient's right to be informed with the duty to protect individuals whose vulnerability may be heightened at the time of diagnosis.
Methods:
This work presents an ethical analysis of the principles governing diagnostic disclosure in medical oncology.
Results:
Providing medical information is both a professional duty and a key component of the therapeutic relationship. However, announcing a cancer diagnosis remains challenging because of the disease's severity and its significant emotional impact on patients.
This situation raises ethical concerns related to beneficence and non-maleficence. Beneficence requires physicians to provide clear and accurate information that enables patients to participate in decision-making, while non-maleficence calls for minimizing potential psychological harm caused by abrupt or poorly adapted disclosure.
The Tunisian Medical Code of Ethics addresses this issue. Article 36 allows a severe or fatal prognosis to be withheld and disclosed with great caution, while relatives may generally be informed unless the patient objects or designates specific individuals to receive such information
Conclusion:
Disclosing a cancer diagnosis should take into account the patient's emotional state. Physicians should adapt the timing and extent of information and consider the patient's preferences.

7. How sociodemographic factors shape patient understanding of Cancer treatment information

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Introduction:
Providing clear and helpful information about cancer treatment is essential for patients' understanding and satisfaction. Patients may perceive the usefulness of this information differently depending on their age, education, or other sociodemographic factors. This study aimed to assess the influence of sociodemographic factors on patients' perceived helpfulness of treatment information and their overall satisfaction.
Materials and Methods:
A cross-sectional survey was conducted among cancer patients who completed radiotherapy at the radiation oncology department, Farhat Hached Hospital, Sousse, Tunisia, between July and December 2025. Patients' perceptions were assessed using the EORTC QLQ-INFO25 questionnaire, covering information on disease, medical tests, treatments, supportive services, and overall satisfaction.
Results:
Thirty patients completed the questionnaire with a median age of 55 years [34–74] and sex-ratio (M/F) ratio: 2.3. Half of the patients had a secondary level of education (50%), followed by university level (20%), primary education (16.7%), and illiterate patients (13.3%). The

majority of patients were married (76.7%), while widowed patients represented 10%. Both single and divorced patients accounted for 6.7% each.
Most patients were civil servants (43.3%), followed by unemployed individuals (26.7%) and manual workers (20%), while senior executives represented 10% of the study population. The majority had non-metastatic disease (90%), with breast cancer being the most common diagnosis (33.3%). All patients received radiotherapy, in combination with surgery (66.7%), chemotherapy (83.3%) and hormonotherapy (40%). Perceived helpfulness and satisfaction were similar between men and women, with median scores of 2.4 and 2.6, respectively. Patients aged over 50 years reported higher perceived helpfulness and satisfaction with treatment-related information, with a median score of 3.3, compared to a median score of 2 among patients younger than 50 years.
Among patients older than 50 years, both helpfulness and satisfaction tended to increase with educational level, with median scores of 2 for primary-educated, 2.8 for secondary-educated, and 2.7 for university-educated patients. A similar pattern was observed in patients younger than 50 years, with median scores of 2, 2.8, and 2.7 for primary, secondary, and university education, respectively.The perceived scores of helpfulness and satisfaction varied according to patients' occupational status. Senior executives reported the highest scores with a median of 3.3, indicating they found the treatment information most useful and satisfactory. Civil servants had a median score of 2.6, while manual workers reported 2.5. Patients without a formal profession also scored 2.6. This suggests that higher occupational status may be associated with greater perceived helpfulness and satisfaction with treatment information, while scores among other groups were similar and slightly lower.
Conclusion:
Patients' perception of treatment-related information varies according to age and educational level, with older and more educated patients reporting higher satisfaction. These findings highlight the need to tailor information delivery to patient characteristics in order to improve understanding and satisfaction.

8. Lung Cancer Screening: Knowledge, Attitudes and Practices Among Physicians

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Introduction:
Lung cancer remains the leading cause of cancer-related mortality worldwide. Screening with low-dose computed tomography (LDCT) has demonstrated a reduction in mortality among high-risk populations. This study aimed to assess the knowledge, attitudes, and practices of physicians regarding lung cancer screening.
Methods:
A cross-sectional survey was conducted using an anonymous questionnaire distributed online via Google Forms between January and March 2026. The questionnaire assessed participants' knowledge, attitudes, and clinical practices regarding lung cancer screening. It was disseminated online to physicians, including radiation oncologists and medical oncologists. Participation was voluntary and responses were collected for scientific research purposes.
Results:
A total of 36 physicians completed the survey. Most respondents were younger than 30 years (n=25), while 11 were aged between 30 and 50 years. Women represented the majority (n=25, 69%), with a female-to-male ratio of 2.3. Participants included radiation oncologists (n=12, 33%) and medical oncologists (n=11, 30%). Most respondents had less than five years of professional experience (n=27, 75%), and the majority worked in the public sector (n=34, 94%). Thirty-one physicians were non-smokers (86%).
All respondents had previously managed patients at high risk for lung cancer. Most participants (n=33, 91%) believed that lung cancer screening could reduce mortality in high-risk populations, and 23 correctly identified LDCT as the screening modality (63%). Twenty-six indicated that screening should target smokers older than 55 years (72%). However, only 12 physicians (33%) felt sufficiently informed to counsel patients regarding screening. Awareness of international screening recommendations was reported by 21 respondents (58%).
In clinical practice, only 16 physicians (44%) had ever recommended lung cancer screening to patients, mainly for active smokers and former smokers.
Only 12 respondents (66%) had referred patients for a screening chest CT, and six (16%) had previously participated in educational activities on lung cancer screening.
The main barriers identified were the absence of a national screening program (n=26, 72%), patient reluctance (n=25, 69%), limited resources (n=25, 69%), and insufficient patient awareness (n=23, 63%). Most respondents (n=32, 88%) supported the implementation of a national screening program and emphasized the need for clear national guidelines, free access to LDCT, and targeted physician training.
Conclusion:
Despite generally positive perceptions toward lung cancer screening, significant gaps remain in physicians' knowledge and clinical implementation. Strengthening training and establishing a national organized screening program may improve the uptake of lung cancer screening in high-risk populations.

9. Palliative Radiotherapy at the End of Life: Ethical Dilemmas and Medico-Legal Considerations

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Introduction:
Palliative radiotherapy plays a key role in the management of advanced cancers, primarily aiming to relieve symptoms and improve quality of life. However, in certain situations of very advanced disease, its indication may raise ethical concerns when treatment risks prolonging the suffering of already vulnerable patients.
Methods:
This study presents an ethical reflection on decision-making in palliative radiotherapy, based on the fundamental ethical principles guiding medical practice.
Results:
In patients with advanced cancer, often associated with severe deterioration of general condition, fatigue, and pain, repeated therapeutic interventions may increase the treatment burden and prolong suffering, particularly near the end of life. In this context, the indication for palliative radiotherapy should rely on a careful evaluation of the benefit–risk balance and the principle of proportionality of care, avoiding interventions that offer no meaningful benefit and preserving quality of life.
Therapeutic decisions should be guided by core ethical principles. Beneficence requires prioritizing interventions likely to provide real benefit, while non-maleficence calls for avoiding treatments that may cause disproportionate harm. Respect for patient autonomy also implies providing clear and honest information about the goals and limits of treatment, allowing patients' preferences to guide care.
Conclusion:
At the end of life, palliative radiotherapy should be considered only when a meaningful symptomatic benefit is expected. Decisions should rely on an individualized benefit–risk assessment, the proportionality of care, multidisciplinary discussion, and transparent patient information in order to avoid disproportionate treatment and preserve the patient's dignity.

10. Discrepancy Between Self-Perception and Actual Performance in OAR Delineation Among Radiation Oncology Residents

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Background:
Accurate delineation of organs at risk (OARs) is essential in external beam radiotherapy to ensure optimal dose distribution and minimize toxicity. Despite the availability of international contouring guidelines, significant variability persists, particularly among radiation oncology residents. This study aimed to evaluate radiation oncology residents' self-perceived competence in OAR delineation and to assess its consistency with their training exposure and institutional practices.
Methods:
A cross-sectional descriptive study was conducted in Tunisia among 30 radiation oncology residents using a structured questionnaire. The survey assessed prior training in OAR delineation, confidence level, perceived adherence to international guidelines, availability of local protocols, supervision modalities, anatomical sites of difficulty, and educational needs. Data were analyzed descriptively.
Results:
A total of 30 residents were included. Only 10% reported having received formal training in OAR delineation, while 90% had no specific training. Despite this, 70% reported a high level of confidence and 30% a moderate level. Regarding clinical practice, 90% believed they adhered to international contouring guidelines. However, 70% reported the absence of a local contouring protocol, and 30% were unaware of its existence. Supervision was mainly performed through direct correction with a senior physician in 80% of cases, while 20% reported validation without direct interaction. Delineation difficulties were most frequently reported in head and neck (70%), followed by hematological sites (40%) and central nervous system (30%) . Multiple-site difficulties were reported in 40% of residents, with several participants identifying challenges across more than one anatomical region. In terms of educational needs, 70% of residents expressed the need for dedicated contouring training sessions, and requested simplified, site-specific local protocols.
Conclusion:
This study demonstrates a marked discrepancy between high self-reported confidence and limited formal training and structural support in OAR delineation. The absence of standardized protocols and the strong demand for additional training highlight the need for structured educational programs, implementation of local guidelines, and reinforcement of supervision to improve OAR delineation quality and ensure patient safety.

11. Refusal of Treatment in Oncologic Radiotherapy: Legal Framework and Physician Obligations in Tunisia

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Introduction:
Refusal of treatment in oncologic radiotherapy represents a complex clinical and medico-legal situation that may compromise both vital and functional prognosis.In this case, physicians must manage the situation in accordance with legal provisions governing the physician–patient relationship and informed consent.
Methods:
A review of Tunisian legislation regulating medical practice was conducted, addressing treatment refusal, focusing on legal provisions related to patient information, informed consent, documentation of refusal, and medical liability.
Results:
In Tunisia, refusal of treatment is legally recognized and regulated by several legal instruments. The Code of Medical Ethicsrequires physicians to provide clear, fair, and appropriate information regarding the patient's condition and the proposed treatment. The Patient Rights Charter (Ministry of Health Circular No. 36 of May 19, 2009) affirms the patient's right to accept or refuse treatment after receiving comprehensive information on expected benefits, potential risks, and therapeutic alternatives.
The General Hospital Regulations (Decree No. 81-1634 of November 30, 1981) also recognize the patient's right to refuse care while emphasizing the obligation to maintain continuity of medical management.
More recently, Law No. 32-2024 on medical liability highlights the importance of documenting both the information provided and the patient's refusal in the medical record and provides legal protection for physicians when the refusal is free, informed, and properly recorded.
Conclusion:
In Tunisia, refusal of radiotherapy is a legally recognized patient right. Ensuring adequate patient information, proper documentation of the refusal, and continuity of medical follow-up are essential to meet legal requirements and safeguard medical practice.

12. Factors Associated with Poor Sleep Quality in Cancer Patients Undergoing Radiotherapy: A PSQI-Based Cross-Sectional Study

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Introduction:
Sleep disturbances are frequent among cancer patients and can impair quality of life and treatment tolerance. Pain, psychological distress, and anticancer therapies may disrupt sleep, but data in patients undergoing radiotherapy remain limited.This study aimed to assess sleep quality using the Pittsburgh Sleep Quality Index (PSQI) and to identify factors associated with poor sleep.
Methods:
A cross-sectional study was conducted at the Institut Salah Azaiez, including patients undergoing radiotherapy for various malignancies. Sleep quality over the past month was assessed with the PSQI (0–21; scores >5 indicate poor sleep).
Demographic, clinical, and treatment-related variables were collected. Univariate and multivariate logistic regression analyses were performed to identify factors associated with poor sleep quality.
Results:
Sixty-nine patients completed the questionnaire (median age 55 years, range 32–82). Most had medium socioeconomic status (78%). Cancer types included breast (46%), gynecological (18%), head-and-neck (13%), gastrointestinal (12%), and pelvic (12%). Treatments were radiotherapy alone (69%), concurrent chemoradiotherapy (26%), and other (5%). The median PSQI score was 4.0 (range 0–16), with 38% exhibiting poor sleep.
In univariate analysis, tumor site (head-and-neck and gastrointestinal vs others) was associated with poor sleep (OR = 3.47; 95% CI: 1.10–10.95; p = 0.034), and concurrent chemoradiotherapy showed a trend toward higher risk (OR = 2.95; 95% CI: 0.96–9.03; p = 0.059). Multivariate analysis identified no independent predictors, likely due to collinearity between tumor site and treatment modality.
Conclusion:
Sleep disturbances affect over one-third of patients undergoing radiotherapy. High-risk groups include those with head-and-neck or gastrointestinal cancers and patients receiving concurrent chemoradiotherapy. Routine PSQI screening may enable early identification and targeted supportive interventions to improve patient care and quality of life

13. Tunisian Legal Framework for Gamete Preservation in the Context of Radiotherapy

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Introduction:
Oncologic treatments, particularly radiotherapy, may impair gonadal function and compromise future fertility. Fertility preservation through gamete cryopreservation, sperm in men and oocytes in women, has therefore become an important component of supportive cancer care. In this setting, a clear legal framework is essential to ensure compliance with ethical principles and the protection of patient rights. This study aims to outline the Tunisian legal framework governing gamete preservation in patients exposed to gonadotoxic treatments.
Methods:
A review of Tunisian legislation related to reproductive medicine was conducted, combined with an analysis of the scientific literature addressing fertility preservation in male and female cancer patients.
Results:
In Tunisia, gamete preservation is regulated by Law No. 2001-93 of August 7, 2001, governing reproductive medicine. This legislation permits the cryopreservation of spermatozoa and oocytes when fertility is threatened by potentially gonadotoxic treatments such as radiotherapy. For strictly medical indications, this option may exceptionally be offered to unmarried individuals. The procedure requires the patient's free, informed, and written consent and must be performed in accredited medical facilities. Gametes may be stored for a period of five years, renewable upon written request. The law strictly prohibits commercialization or use for non-medical purposes. The cryopreservation of fertilized oocytes in the form of embryos is subject to stricter legal and ethical regulation and remains a debated issue distinct from the preservation of unfertilized gametes.
Conclusion:
Tunisian legislation authorizes gamete cryopreservation in patients at risk of treatment-related infertility. However, this practice remains strictly regulated, limited to medical indications, dependent on written informed consent, and restricted to accredited institutions.

14. Radiotherapy and Body Mass Index: A Neglected Variable in Oncology?

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Introduction:
Malnutrition is a common yet often underestimated complication in cancer care, especially during radiotherapy. Body Mass Index (BMI), a simple anthropometric indicator, is frequently overlooked in the assessment of treatment tolerance and nutritional risk. This study aims to assess the relationship between BMI (initial and final), tumor location, nutritional toxicity, and the use of oral nutritional supplements (ONS) during radiotherapy, and to identify the most vulnerable patient profiles.
Materials and Methods:
A descriptive longitudinal study was conducted between January and March 2025 in the Radiotherapy Oncology Department at Farhat Hached Hospital. A total of 60 patients .Data collected included: initial and final weight, height, initial BMI (BMIi), final BMI (BMIf), absolute and percentage weight loss, presence of malnutrition, use of oral nutritional supplements (ONS), type of treatment received, tumor location, total radiation dose, and number of fractions. Statistical analysis was performed using SPSS version 20.
Resualts :
The mean age of the study population (n = 60) was 58.6 ± 12.4 years (range: 26–84). The Sexe ratio was 1.In this study, 76.7% (n=46)of patients were treated using Volumetric Modulated Arc Therapy (VMAT), while the remaining 23.3% (n=14) received radiotherapy with the 2300D technique.The dose distribution was characterized by a mean treatment duration of 47.05 days (standard deviation: ±26.67), with treatment periods ranging from a minimum of 4 days to a maximum of 134 days.
Tumors were most frequently located in the pelvic region (50.0%, n = 30), followed by the head and neck (26.7%, n = 16), breast (18.3%, n = 11), and lung (5.0%, n = 3). Patients received exclusive radiotherapy (26.7%, n = 16), concomitant chemoradiotherapy (41.7%, n = 25), or other combined ttherapy protocols such as endocrine therapy (31.6%, n = 19).

15. Factors Associated with Poor Sleep Quality in Cancer Patients Undergoing Radiotherapy: A PSQI-Based Cross-Sectional Study

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Introduction:
Sleep disturbances are frequent among cancer patients and can impair quality of life and treatment tolerance. Pain, psychological distress, and anticancer therapies may disrupt sleep, but data in patients undergoing radiotherapy remain limited.
This study aimed to assess sleep quality using the Pittsburgh Sleep Quality Index (PSQI) and to identify factors associated with poor sleep.
Methods:
A cross-sectional study was conducted at the Institut Salah Azaiez, including patients undergoing radiotherapy for various malignancies. Sleep quality over the past month was assessed with the PSQI (0–21; scores >5 indicate poor sleep). Demographic, clinical, and treatment-related variables were collected. Univariate and multivariate logistic regression analyses were performed to identify factors associated with poor sleep quality.
Results:
Sixty-nine patients completed the questionnaire (median age 55 years, range 32–82). Most had medium socioeconomic status (78%). Cancer types included breast (46%), gynecological (18%), head-and-neck (13%), gastrointestinal (12%), and pelvic (12%). Treatments were radiotherapy alone (69%), concurrent chemoradiotherapy (26%), and other (5%). The median PSQI score was 4.0 (range 0–16), with 38% exhibiting poor sleep. In univariate analysis, tumor site (head-and-neck and gastrointestinal vs others) was associated with poor sleep (OR = 3.47; 95% CI: 1.10–10.95; p = 0.034), and concurrent chemoradiotherapy showed a trend toward higher risk (OR = 2.95; 95% CI: 0.96–9.03; p = 0.059). Multivariate analysis identified no independent predictors, likely due to collinearity between tumor site and treatment modality.
Conclusion:
Sleep disturbances affect over one-third of patients undergoing radiotherapy. High-risk groups include those with head-and-neck or gastrointestinal cancers and patients receiving concurrent chemoradiotherapy. Routine PSQI screening may enable early identification and targeted supportive interventions to improve patient care and quality of life

16. Body Image Disturbance in Uterine Cancer Patients: Prevalence and Predictive Factors

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Introduction:
Uterine cancers and their aggressive multimodal treatments (surgery, radiotherapy, and chemotherapy) frequently compromise a woman's sense of femininity and integrity, leading to significant body image disturbances (BID). This study aimed to describe the prevalence of BID and identify associated and predictive factors in a cohort of Tunisian patients treated for uterine cancer.
Methods:
This was a descriptive cross-sectional study conducted at the Salah Azaïez Institute in Tunis.
The Body Image Scale (BIS) was used to evaluate body image.
Statistical analysis utilized Pearson's correlation and the Chi-square test.

Results:
A total of 100 patients treated between January and June 2019 were included in this study.Most patients (54%) had endometrial cancer, while 46% had cervical cancers.Treatment modalities included surgery (73%), chemotherapy (35%), external beam radiotherapy (65%), and brachytherapy (93%).The prevalence of Body Image Disturbance (BIS score > 12) in the cohort was 40%, with a mean BIS score of 12.03 (range 0–30). BID was higher among younger, educated, and divorced patients, as well as those lacking family support (p=0.016). Analytically, BID was significantly associated with poor tolerance of treatment (p=0.03; OR=3.73) and treatment via low-dose-rate brachytherapy (p=0.04; OR=2.64). Furthermore, BID was significantly elevated in patients who reported a poor-quality marital life both before (p=0.008; OR=4.33) and after (p=0.012; OR=3.29) diagnosis, and those with poor quality sexual function post-cancer (p=0.001; OR=4.24). Multivariate analysis revealed that low socio-economic status was an independent protective factor against BID (OR 0.004; p=0.04).
Conclusion:
Body image disturbance is a frequent and significant psychological consequence of uterine cancer treatment. It is strongly linked to both treatment-related side effects and pre-existing or post-treatment relationship issues.
These findings emphasize the necessity of systematic body image screening and targeted psychosocial interventions, especially for patients with pre-existing relationship challenges.

17. Beyond a Scar: An Aggressive Case of Marjolin'sUlcer of the UpperLimb

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Background:
marjolin'sulcerrepresentsapproximately1–2% of all cutaneous quamous cell carcinomas (cSCC), yetaccounts for a disproportionately aggressive subset, with reported regional metastasis rates reaching20–30%, significantly higher than conventional cSCC. Arising decades after chronicin jury, these tumors are frequently diagnosed at an advanced stage.
Methods:
We report a single case of Marjolin'sulcermanaged at our institution withclinicopathological and radiologicalcorrelation.
Case Presentation:
An 82-year-old womanwith a history of hypertension presentedwith a progressivelyenlarging mass of the leftupperlimb, developing on a burnscarsustained more than 50 yearsearlier. Magnetic resonanceimagingrevealed a 6 × 7 cm heterogeneoustumorcentered on the distal biceps muscle, with extensive necrotic and hemorrhagic components, suggestive of deep soft tissue infiltration. Staging CT showed no distant metastases.
The patient initially under wentwide local excision. Histopathologicalanalysisconfirmed a well-differentiatedkeratinizing invasive squamouscellcarcinoma. Due to incompletemargins, a second surgeryconsisting of transhumeral amputation was performed. Final pathology demonstrated a 9 cm well-differentiated keratinizing squamous cell carcinoma with extensive muscular invasion and persistent positive lateral and deepmargins (R1 resection), indicating aggressive loco regional disease.
Subsequentimagingidentifiedtwonecroticaxillarylymphnodeshighlysuspicious for metastaticinvolvement. In the context of residual disease and nodal suspicion, the patient was proposed for adjuvant radiotherapy, with treatment decision on going at the time of reporting.
Conclusion:
This case illustrates the aggressive biological behavior of Marjolin'sulcer, characterized by late presentation, deep invasion, and early nodal suspicion despite radical surgery. It underscores the critical importance of earlybiopsy of chronics cars and highlights the therapeutic challenges encountered when diagnosisoccurs at an advanced stage, where optimal management often relies on multimodal strategies.

18. Focal Nodular Hyperplasia Associated with Hepatic Metastases from an Ileal Neuroendocrine Tumor: A Diagnostic Pitfall

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Introduction :
Multiple hepaticnodular lesions represent a diagnostic challenge, particularly in patients with digestive neuroendocrine tumors (NETs), whoselivermetastasesoccurin50–75% of patientsduring the course of the disease. The coexistence of a benignlesionsuch as Focal Nodular Hyperplasia (FNH) withhepaticmetastases can constitute a true diagnostic pitfall in imaging.
Observation :
We report the case of a 47-year-old womanwith a history of epilepsytreatedwith valproate, whopresentedwith right hypochondrial pain evolving over eightmonths, associatedwithchronicdiarrhea and a progressivelyincreasing sensation of abdominal distension. Abdominal ultrasound revealed an 8-cm lefthepatic lesion associated with multiple hepatic nodules. Computedtomography and liver MRI showed a dominant lesionwithtypicalfeatures of Focal Nodular Hyperplasia (FNH), characterized by a central scar and homogeneous arterialenhancement with delayedenhancement of the scar.
The other nodules demonstrated intense arterialenhancement (wash-in), suggestive of metastases of Neuroendocrine Tumororigin. CT-guidedbiopsy of the hepaticlesionsconfirmed the diagnosis, revealing a well-differentiated grade 1 neuroendocrine tumor (Ki-67 < 2%) with positive chromograninstaining. The etiologicalworkupidentified a 23-mm ilealtumor.
The biological work uprevealed elevate durinary 5-HIAA level swith carcinoid syndrome, complicated by tricuspidinsufficiency on echocardiography. A 68Ga-DOTATATE PET-CT scan is currently being performed for staging, as this examination is now considered a reference modality for detecting secondary lesions of well-differentiated Neuroendocrine Tumors.
Conclusion:
This case illustrates the diagnostic difficulty posed by the coexistence of Focal Nodular Hyperplasia (FNH) and hepaticmetastasesfrom a Neuroendocrine Tumor. Recognizing the typicalradiologicalfeatures of hepaticlesionsis essential to avoidmistakenlyattributing a benignlesion to metastaticdisease, whichcouldsignificantly alter the therapeuticstrategy. Although rare, the coexistence of FNH and neuroendocrine tumormetastasesshouldberecognized to preventsuch diagnostic pitfalls in imaging.

19. Refeeding syndrome in head and neck cancer: time for systematic electrolyte monitoring?

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Background:
Refeeding syndrome (RFS) is a severe and often underdiagnosed metabolic complication in malnourished patients, particularly in head and neck oncology.
Objective:
To assess electrolyte abnormalities suggestive of RFS and emphasize the need for systematic biological screening.
Methods:
A descriptive study including 40 patients with head and neck cancers was conducted through Radiotherapy treatment Parameters analyzed included natremia, kalemia, phosphatemia, calcemia, magnesemia,

albuminemia, and total proteins. Results were expressed as mean ± standard deviation and frequencies.

Results:

All patients were malnourished, classified as moderate in 65% of cases (n=26) and severe in 35% (n=14). Mean biological parameters were 135.7 ± 5.1 mmol/L for natremia, 3.82 ± 0.53 mmol/L for kalemia, 1.06 ± 0.36 mmol/L for phosphatemia, 2.34 ± 0.19 mmol/L for calcemia, and 0.88 ± 0.49 mmol/L for magnesemia. The observed electrolyte abnormalities included moderate hypophosphatemia in 16.1% of cases, moderate hypokalemia in 25%, moderate hyponatremia in 33.3%, moderate hypocalcemia in 27.8%, and moderate hypomagnesemia in 40.7% of cases. However, phosphatemia and magnesemia were not systematically assessed in all patients.

Conclusion:

These findings strongly suggest that RFS is underdiagnosed in patients with head and neck cancers. The lack of systematic assessment of phosphate, calcium, and magnesium levels represents a major gap in clinical practice.

Routine monitoring of phosphate, calcium, and magnesium levels should be implemented to prevent potentially life-threatening complications.

20. Inflammatory myofibroblastic tumour of maxillary sinus: a case report

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Introduction:

Inflammatory myofibroblastic tumor (IMT) is a borderline tumour occurring primarily in the viscera and soft tissue of children and young adults. The head and neck region is relatively less commonly involved. Herein we report another rare case of maxillary sinus' IMT.

Methods:

A 13-year-old patient with recurrent nasal inflammatory pseudo plyposis, presented in our department of maxillofacial surgery for tumour of right maxillary sinus with epistaxis. He underwent a surgical biopsy.

Results:

We received polypoid whitish and hemorrhagicfragments whose size varies between 0.4 and 3 cm. histologically, they are boarded by respiratory epithelium, lining a lamina propria with abundant lymphocytic and plasmacytic infiltrate. Within this infiltrate, we found scattered cells with abundant amphophilic cytoplasm containing an enlarged nuclei and a distinct nucleoli. There were no necrosis and no mitotic activity. Hodgkin lymphoma and rhabdomyosarcoma were ruled out thanks to the negativity of CD15,CD30, Myogenin and MyoD1. The positivity of ALK1 and the morphological aspects were in line with the diagnosis of IMT.

Conclusion:

IMTs affecting the nasal cavity and paranasal sinuses are rarely described in the english literature. Unlike our case, the cases ofIMT in nasal cavity and paranasal sinuses described in the literature can arise in patients of all agesmore commonly in adults. The most frequently affected site is the maxillary sinus.Some IMT have large histiocytoid cells resembling ganglion cells or Reed-Sternberg cellsof Hodgkin lymphoma.The presence of these cells is related to poorer clinical outcomes.

21. Late Gastrointestinal Complications of Radiotherapy: A Single-Center Experience and the Role of Therapeutic Endoscopy

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Introduction :

Radio the rapyis a cornerstone in the management of many malignancies;however, it may lead to late gastrointestinal complications that can bedebilitating, predominantly radiation proctitis and digestive strictures. Their management increasingly relies on interventional endoscopy.

Objective: To analyze the epidemiological, clinical, endoscopic, and therapeutic characteristics of post-radiation gastrointestinal complications.

Methods:

This is a retrospective study conducted in the gastro enterology department of Taher Sfar University Hospital in Mahdia, including 15 patients managed for gastrointestinal complications following radiotherapy over a 10-year period.

Results:

The mean age of patients was 56 ± 4 years, with a slight male predominance (8 men and 7 women). Indications for radiotherapy were mainly prostate cancer in 6 cases, followed by lung cancer in 4 cases, cervical cancer in 2 cases, and rectal cancer in3 cases.The mean time to onset of complications was 18 months, ranging from 5 to 60 months.

The observed complications included 10 cases of radiation proctitis, 4 cases of radiation-inducedesophagealinvolvement, and 1 case of radiation enteritis.

Clinically, rectal bleeding associated with rectal syndrome was the main presenting feature in rectal involvement, where assolid dysphagia with weight loss was observed in esophageal cases.

Management was primarily based on therapeutic endoscopy, particularly argon plasma coagulation performedin 7 patients with hemorrhagic radiation proctitis. Corticoste radiotherapy was administered in 3 patients, while esophagealstenting was required in one case of severe stricture. Clinical out come was favorable in approximately one-third of patients, with significant symptomaticim provement.

Conclusion:

Late gastrointestinal complications of radiotherapy are common and potentially severe. Their management requires a multi disciplinary approach, in which interventional endoscopy plays a central role, enabling effective symptom control and improvement in quality of life

22. Late-Onset Radiation-Induced Squamous Cell Carcinoma of the External Auditory Canal Following Nasopharyngeal Carcinoma Treatment: A Case Report

Fayala R,Bettaieb O, Naija B,Sghaier S,Chamsi A, Meddeb I, Ouri N,Tbessi S, Yazid D,Hadj Abdallah H, Zanzouri R, Bouzid N, Kanoun S, Tebra S

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Introduction

Squamous cell carcinoma of the external auditory canal is a rare entity, accounting for less than 2% of head and neck cancers, and its diagnosis is challenging due to nonspecific clinical manifestations. We report a case occurring 13 years after radiotherapy for undifferentiated nasopharyngeal carcinoma, fulfilling the Cahan criteria for radiation-induced malignancy.

Case presentation :

We report the case of a 35-year-old patient with no prior medical or surgical history, who had been followed for 18 years since the age of 17 for undifferentiated nasopharyngeal carcinoma (UCNT), staged T4N3aM0. He initially received neoadjuvant chemotherapy consisting of three cycles of TPF (docetaxel, cisplatin, and 5-fluorouracil), followed by cervicofacial 2D radiotherapy delivering 72 Gy to the nasopharynx and involved lymph nodes, and 55.8 Gy to the prophylactic nodal regions. Radiotherapy was complicated by grade 2 mucositis and grade 2 dermatitis. The patient achieved a complete response, confirmed by imaging and endoscopy.

Thirteen years later, follow-up MRI revealed a soft tissue lesion in the external auditory canal measuring 29 × 13 × 18 mm, extending to the superior pole of the right parotid gland. A biopsy confirmed squamous cell carcinoma. Based on the Cahan criteria, the tumor was considered radiation-induced. Staged T3N0M0, the patient underwent subtotal

petrosectomy, total parotidectomy, and right selective neck dissection (levels I–II).
Histopathological examination showed a well-differentiated, keratinizing, infiltrating squamous cell carcinoma of the right external auditory canal, measuring 2.5 cm, with invasion of the parotid gland and bone. Surgical margins were positive. Lymph node analysis revealed one positive intraparotid node out of three examined and one positive node out of four in the parotidectomy specimen, with no tumor infiltration in the remaining gland. The final staging was pT3N1 R1.
The patient received postoperative re-irradiation of 60 Gy in 30 fractions using intensity-modulated radiotherapy, with all dose constraints respected. Treatment tolerance was marked by grade I mucositis and grade II dermatitis.
Conclusion:
This case highlights the risk of late secondary malignancies following radiotherapy and underscores the importance of long-term follow-up. Management requires a multidisciplinary approach, balancing oncologic control with treatment-related toxicity.

23. Diagnostic challenge of Soft tissue small cell lymphoma, a case report

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Introduction:
Soft tissue lymphomas account approximately 0.1% of lymphomas and 0.01% of soft tissue tumors. Their diagnosis represent a challenge for pathologist, due to their low incidence, their morphology often similar to that of a reactive infiltrate, and their poorly understood pathogenesis. Our objectives are to discuss pathological criteria for distinction between reactive infiltrate and small cell proliferation and to report etiology hypothesis of soft tissue lymphoma.
Methods:
We report the case of a 62-year-old man, with a history of high blood pressure and allergic facial dermatitis, who consulted on February 2022 for painful, 10 cm of large, swelling of the lower extremity of the right arm.
The MRI revealed a heterogeneous tumor located behind the median nerve, suggesting a type 1 neurofibroma.
Results:
A biopsy was performed. Microscopic examination showed monomorphic small cell lymphoid proliferation. At the immunohistochemical study, tumoral cells expressed CD20, CD23, CD10 Bcl2, and Bcl6. However: CD3, CD5 and Cyclin D1 were negatives.
The diagnosis of follicular lymphoma was made. The PET scan showed hypermetabolism of the mass with involvement of axillary, right supraclavicular, and mediastinal lymph nodes. The patient was followed in oncology and treated with 4 courses of R-CHOP chemotherapy with a clear clinical improvement.
Conclusion:
Patients with primary soft tissue lymphomas typically present with symptoms such as a soft tissue mass, swelling, and pain. The most common histological type is diffuse large B-cell lymphoma. The main sites commonly affected are the lower extremities, particularly the thigh and calf. Some soft tissue lymphomas are linked to HIV infection or rheumatoid arthritis. Although some authors suggest that a general history of allergy increases the risk of NHL, these hypothesis are not yet proven.
In conclusion: Soft tissue lymphoma is extremely rare and requires a multidisciplinary approach for accurate diagnosis, which can avoid unnecessary surgical interventions.

24. Preparedness of Radiation Oncology Residents in Managing Acute Radiotherapy Toxicities: A National Multicenter Survey

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Background
Effective management of acute radiotherapy (RT) -induced toxicities is essential to ensure treatment adherence and optimize patient outcomes. However, disparities in training may lead to variability in clinical practice. This study aimed to evaluate radiation oncology residents' training, confidence, and management practices regarding acute toxicities.
Materials and Methods
A national cross-sectional study was conducted among 33 radiation oncology residents in Tunisia using a structured, anonymized questionnaire.
The survey assessed training exposure, clinical involvement, confidence in toxicity grading (CTCAE v5.0), and management practices related to acute RT-induced toxicities.
Results
A total of 33 radiation oncology residents participated in the study. Only 18.2% reported receiving specific training on acute RT-induced toxicities.
Despite substantial clinical exposure, with 57.6% always and 39.4% often involved in weekly patient consultations, 90.9% reported hesitation in clinical decision-making when managing acute toxicities.
Overall confidence levels were moderate: 60.6% reported high confidence, while 39.4% reported low to intermediate confidence. Confidence in toxicity grading using CTCAE v5.0 was lower, with only 42.5% reporting high confidence. The most frequently reported challenging toxicities were mucosal, including dysphagia (39.4%, n=13) and mucositis (33.3%). Access to international guidelines was limited, with 72.7% reporting difficulty accessing updated recommendations.
All participants (100%) expressed the need for standardized management protocols. Preferred tools to improve practice included mobile applications (48.5%), practical guidelines (33.3%), and multidisciplinary discussions (18.2%).
Conclusion
Significant gaps exist in training and guideline accessibility despite high clinical exposure among radiation oncology residents. The high rate of decision-making uncertainty highlights the need for structured educational interventions.
Implementation of standardized protocols aligned with international recommendations, along with accessible decision-support tools, may improve consistency in care, enhance residents' confidence, and ultimately optimize patient outcomes.

25. Photobiomodulation in Head and Neck Cancer Radiotherapy: Knowledge, Clinical Practice, and Perception Among Oncology Physicians

Fayala R,Sghaier S, Naija B,Bettaieb O,Chamsi A, Meddeb I, Ouri N,Tbessi S, Yazid D,Hadj Abdallah H,Zanzouri R, Bouzid N, Kanoun S, Tebra S

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Background:
Photobiomodulation (PBM) therapy, using low-level laser or LED light, has emerged as a promising non-invasive modality to prevent and manage radiation-induced toxicities in head and neck cancer (HNC).
Despite growing evidence, its clinical use remains limited in routine radiotherapy practice.
Methods:

A descriptive cross-sectional study was conducted in April 2025 using a self-administered questionnaire distributed to physicians in radiation oncology, medical oncology, dermatology, and otorhinolaryngology. The survey assessed knowledge, clinical practice, perceived efficacy, and barriers to PBM use in HNC radiotherapy. Data were analyzed descriptively.

Results:

Thirty-two physicians responded: 65.6% radiation oncologists and 34.4% medical oncologists. Awareness of PBM was high (78%), but only 21.8% reported prior clinical use. Perceived benefits included reduction of radiation-induced skin reactions (81%) and oral mucositis (68%).

Major barriers were lack of training (72%), absence of standardized protocols (69%), equipment cost (56%), and insufficient institutional recognition (63%).

Conclusion:

PBM is perceived as an effective supportive care strategy for mitigating acute toxicities in head and neck cancer radiotherapy. However, its integration into clinical routine requires standardized guidelines, structured training programs, and stronger institutional support.

26. Quality of Life After Total Neoadjuvant Therapy According to the PRODIGE 23 Protocol: A Real-World Experience from Tunisia

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Introduction:

Total neoadjuvant therapy (TNT), as established by the PRODIGE 23 trial, has significantly improved oncological outcomes in locally advanced rectal cancer. However, data regarding quality of life (QoL) after completion of TNT remain limited, particularly in real-world settings.

Methods:

We conducted a retrospective study including patients treated with TNT according to the PRODIGE 23 protocol, at the Radiotherapy Department of Farhat Hached University Hospital, Sousse, Tunisia. Between 2020 and 2026. QoL was assessed using the EORTC QLQ-C30 in patients alive at the time of evaluation.

Results:

Among 36 treated patients, QoL assessment was feasible in 22. Median age was 55 years (range: 32–76), with male predominance (sex ratio: 2.2).

Overall functional status was relatively preserved, with a mean global functional score of 72%. Among functional domains, emotional functioning was the most impaired (mean: 49%), indicating a persistent psychological burden following treatment. In contrast, cognitive functioning was best preserved (mean: 77%).

Symptom scales showed a moderate residual burden, with fatigue and pain both averaging 33.3%. Financial difficulties were notable (mean: 37%), reflecting the broader impact of treatment. Global health status reached **60%**, reflecting an intermediate perception of overall health after treatment.

Conclusion:

In this real-world cohort, QoL after completion of the PRODIGE 23 protocol appears globally preserved, despite a significant impairment in emotional well-being. These findings highlight the importance of integrating psychological and survivorship care following total neoadjuvant therapy. Further prospective studies are needed to better characterize QoL trajectories after TNT.

27. Special subtypes of triple negative breast cancer with good prognosis: a clinico-pathological study over two decades

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Introduction:

TNBC represents 15–20% of breast cancers and is usually associated with poor prognosis, but includes heterogeneous subtypes with favorable outcomes requiring tailored management.

Methods:

Retrospective study (2005–2024) including rare favorable TNBC subtypes ((cystic adenoid carcinoma (CAD), Invasive breast carcinoma with medullary features (IBCMF),fibromatosis-like and adenosquamous metaplastic carcinoma, secretory carcinoma)).

Results:

22 cases were identified (18% ADC, 82% IBCMF), with a mean age of 50.4 years. ADC patients were older, and lymph node involvement occurred only in IBCMF (16.7%); no metastases were found at diagnosis.ADC tumors were mostly low grade, whereas IBCMF were high grade; all patients underwent surgery, with frequent use of adjuvant chemotherapy and radiotherapy.

Ten-year overall survival was favorable (75% ADC, 83.3% IBCMF); tumor size and nodal status were poor prognostic factors.

Conclusions: Favorable TNBC subtypes show good prognosis, supporting histology-based management to avoid overtreatment, especially adjuvant chemotherapy, despite limited sample size.

28. Clinico-pathological study of Kaposi sarcoma disease among HIV positive Tunisian patients

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Introduction:

Kaposi sarcoma (KS) remains one of the most frequent malignancies associated with HIV infection, particularly in patients with advanced immunosuppression. This study aimed to describe the epidemiological, clinical, pathological, and outcome features of KS in our cohort.

Methods:

We conducted a retrospective study over 30years, including all HIV Tunisian patients diagnosed with KS.

Epidemiological data, HIV-related parameters, clinical presentation, histopathological features, treatment modalities, and outcomes were analyzed.

Results:

Twelve cases of KS were identified (44.4% of all tumors), predominantly affecting males (75%) with a median age of 37.5 years. Most patients presented with severe immunosuppression (median CD4: 49 cells/mm³) and high viral loads. Clinically, 58.3% had disseminated disease, most commonly involving both skin and mucosa. Advanced TIS stages were frequent, particularly T1I1S1 (41.7%). Histologically, nodular-stage lesions predominated, and HHV-8 was positive in all tested cases. All patients received antiretroviral therapy (ART), with 58.3% treated with ART alone and others requiring chemotherapy or combined modalities. Despite treatment, 50% of patients died, while 25% achieved complete remission.

Conclusions:

KS in our Tunisian cohort predominantly occurred in young, severely immunocompromised HIV patients.

29. PD-L1 Expression Patterns and Associated Factors in Non-Small Cell Lung Cancer: A 2025 Tunisian Cohort Study

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Introduction:
PD-L1 is an essential biomarker guiding the use of immune checkpoint inhibitors in non-small cell lung cancer (NSCLC), but data on its real-world expression in Tunisia are still limited. This study investigates PD-L1 expression profiles and their relationship with clinicopathological and molecular characteristics in a Tunisian population.
Methods:
This retrospective study included 257 NSCLC patients tested for PD-L1 expression in 2025. PD-L1 was assessed by immunohistochemistry and classified using the tumor proportion score (TPS) as negative (<1%), low (1–49%), or high (≥50%). Associations with clinicopathological variables were analyzed using appropriate statistical tests, followed by multivariate ordinal logistic regression to identify independent predictors.
Results:
PD-L1 expression was negative in 34.6%, low in 40.1%, and high in 25.3% of cases. The cohort was mainly male (84%), with a mean age of 63.9 years, and adenocarcinoma was the predominant subtype (80.2%).
No significant associations were observed between PD-L1 expression and clinicopathological or molecular variables, and multivariate analysis identified no independent predictors.
Conclusion:
PD-L1 distribution was consistent with international reports, with no identified predictors, supporting routine PD-L1 testing in NSCLC.

30. Therapeutic Challenges in Invasive Ductal Carcinoma for a Patient with Suspected Nijmegen Breakage Syndrome

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Introduction:
Nijmegen Breakage Syndrome (NBS) is a rare genetic disorder characterized by chromosomal instability linked to the NBN gene. Its management in oncology is particularly challenging due to the extreme radiosensitivity of healthy tissues.
Methods:
We present the case of a 26-year-old patient with a strong family history of breast cancer and a sister already followed for NBS. The diagnosis confirmed an Invasive Ductal Carcinoma (IDC) of the left breast (T2N0M0, Luminal B HER2-negative, Ki67: 90%). The therapeutic strategy initiated was neoadjuvant chemotherapy (4EC + 12 Taxol) followed by breast-conserving surgery.
Results:
The primary challenge lies in postoperative radiotherapy (RT), as NBS involves a major defect in DNA double-strand break repair, making conventional RT potentially lethal. An oncogenetic panel was requested to confirm the diagnosis. Pending these results, multidisciplinary discussions are ongoing to decide whether to maintain or waive the RT indication, considering the patient's clinical status (39 kg, WHO PS=1).
Conclusion:
This case emphasizes the crucial role of Oncogenetics in personalizing radiotherapy protocols.
In patients suspected of chromosomal breakage syndromes, therapeutic de-escalation or surgical modifications (such as total mastectomy to avoid RT) must be prioritized to ensure patient safety.

31. Dosimetric Comparison and Acute Toxicity Between 3D Conformal Radiotherapy and VMAT in Curative Treatment of Lung Cancer

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Introduction:
Radiotherapy is a cornerstone in the treatment of lung cancer. However, its use is limited by dose constraints to organs at risk (OARs). The aim of this study is to compare 3D conformal radiotherapy and VMAT techniques in terms of dosimetric constraints and acute toxicity profiles in patients treated with curative intent.
Materials and Methods :
This is a retrospective descriptive study including 29 patients treated for non-metastatic lung cancer with curative intent at the Radiation Oncology Department of Farhat Hached Hospital in Sousse between 2024 and 2025.
Results :
The mean age was 63.7 years (range: 46–82 years).Non-small cell lung cancer (NSCLC) accounted for 72.4% of cases, while small cell lung cancer (SCLC) represented 27.6%.Stage III disease was present in 93.1% of patients.A total of 82.8% of patients received induction chemotherapy followed by concurrent chemoradiotherapy.
External beam radiotherapy was delivered at a standard dose of 66 Gy in 72% of patients. Four patients discontinued radiotherapy: two due to esophageal toxicity and deterioration of general condition, and two by personal decision.Fifteen patients were treated using the 3D technique and fourteen using VMAT.
Our study showed that VMAT provides better planning target volume (PTV) coverage (VMAT: 96.4% vs 3D: 93.81%).Both techniques respected the lung V20 constraint; however, VMAT (13.12%) was clearly superior to 3D (17.75%) for the V30 Gy constraint.
The mean dose to the healthy lung was excellent for both techniques (15.01 Gy for 3D and 13.6 Gy for VMAT), remaining well below the 20 Gy threshold recommended in the literature.
Regarding the mean heart dose, 3D appeared slightly better overall, although VMAT remained below the recommended 20 Gy limit.
The esophageal V50 was 18.6% for VMAT versus 25.98% for 3D.
The mean V60 Gy values were acceptable for both techniques; however, 3D showed a significantly higher maximum peak (72%) compared to VMAT (38%).
The predominant toxicity was esophageal, which was better tolerated in patients treated with VMAT (57.1% of cases). Cutaneous toxicity was observed in 26.6% of patients in the 3D group (4 patients), whereas mild radiodermatitis was reported in 7.1% of VMAT cases.
Pulmonary toxicity (20% in the 3D group) was observed in three patients, presenting with persistent dry cough and exertional dyspnea.
Conclusion :
Our study confirms that VMAT offers better precision, improved sparing of healthy lung tissue and the esophagus, while ensuring optimal tumor coverage, particularly in locally advanced stages.