Gastro Intestinal Stromal Tumours (GIST)

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Sarcomas and GIST were presented at 5 plenary and parallel sessions. These were rich in terms of innovation and therapeutic concepts, reporting study results that may have an impact on our daily practice, whether in GIST or sarcomas.

SOFT TISSUE SARCOMAS (STS)

ASCO 2012 has not been a revolutionary year in the field of soft tissue sarcomas (STS). When the first two oral papers deal with a rethink - a proposal for a new classification (AJCC7) of Soft Tissue Sarcomas (Maki et al, abstract 10000) - and with the development of a nomogram to try and measure the risk of relapse in retroperitoneal sarcomas (Gronchi and al, abstract 10001) in order to define adjuvant protocols which still do not exist in this domain in 2012 - the message is clear: therapeutic revolutions are not going to happen this year. Fortunately, there was more to say about sarcomas this year than these two communications.

The concept of targeted therapies that was launched with GIST at the dawn of the third millennium indisputably opened new horizons in the field of Soft Tissue Sarcomas. A better biologic/cytogenetic analysis of sarcomas in general turns each histological sub-type into a potential target for new therapeutic approaches These are going to flourish in the upcoming years. Intracellular signalling pathways are now identified in each histological sub-type and clinical trials can be developed on the basis of molecular abnormalities (causal or secondary). Year 2012 confirms the decline of conventional chemotherapy and the expansion of targeted therapeutics. None of the oral papers dealt with standard chemotherapies! So, what's up for STS in 2012?

1. Adjuvant chemotherapy

No paper this year on a topic for which the international consensus is expressed in the two papers previously mentioned (AJCC7 and nomogram). These could allow a better segmentation of patients in clinical trials in the future.

2. Neo-adjuvant Chemotherapy/radiotherapy

The use of systemic induction treatment or of a first line radiotherapy in locally advanced sarcomas is frequent in centers which are used to managing these diseases. The impact on survival is still to be proven and the selection of patients who may benefit still to be determined. There is still no ongoing randomized trial addressing this question. What do we have to keep in mind on this topic this year?

- A phase I study testing the combination of a sorafenib (Nexavar®) with radiotherapy starting 2 weeks before the first round of chemotherapy (Meyer et al, abstract 10011). Radiotherapy being administered during the 2nd round (without anthracyclines) 28 Gys in 8 fractions in high-risk sarcomas of the extremities: 16 patients included, median size at diagnosis = 11.7 cm, maximum tolerated dose: 400 mg of sorafenib. Clear message : Not to be used. Highly toxic during the induction treatment (94% neutropenia, 50% febrile neutropenia) and also after surgery (38% of post-surgical complications requiring second surgery including one amputation).

- Without sorafenib but with chemo-radiotherapy combinations Two studies: MAID + RTE sequential for one cycle (Look Hong et al, abstract 10058): doxorubicin only (30 mg 3 days) + 27 GYs in 10 days, one cycle only (Mathews et al, abstract 10037). The authors report satisfactory local controls (from 5 to 13%), but without considering the benefit of such a combination compared to chemotherapy only (for high grades), or even to radiotherapy alone (possibly for low grades). When can we expect a real randomized study addressing these questions?

- A phase II study testing first line radiotherapy in retroperitoneal sarcomas (Myles et al, abstract n°10050): 50 Gys pre-operative, +/- 20/25 Gys post-surgery with a familiar conclusion: Pre-operative radiotherapy seems to be useful in retroperitoneal STS when comparing historical series but needs prospective validation. This question is being addressed through the randomized phase III clinical trial, coordinated by EORTC.

In conclusion, nothing really revolutionary in this domain. The fact remains that locally advanced sts tumours are the most discussed cases in dedicated multidisciplinary teams/meetings (RCP in France). More than 60% of patients with localized sarcomas in France still undergo surgery without being previously discussed by RCPs (Ducimetière et al, abstract 10056). The French "NetSarc" project (supported by INCa) aiming at improving initial management of sarcoma patients is seeking to change this situation. The percentage of newly diagnosed patients discussed during regional RCPs (26 on French territory) is currently 36%. This has to be improved and thanks to NetSarc, which will generate crucial information in the upcoming years.

3. Chemotherapy in advanced setting

Even in "palliative" setting, three studies highlight the important role of surgery and/or loco-regional treatments of metastases in the management of patients, influencing their eventual outcome.

Patients treated in the PALSAR (Intensified MAID v.MAID) protocol and achieving complete remission by the combination of chemo + full resection of all residual metastases, have a similar outcome to those who were put in complete remission with chemotherapy alone. These two groups of patients have the most prolonged survival of the 410 patients who were included in this series. (Kotecki et al, abstract 10035). The same message is in the retrospective study of 120 patients who underwent lung metastectomy (Vohra et al, abstract 10070): Those who had several surgeries have a more prolonged survival than those who only had one (natural bias), patients who are metastatic at initial diagnosis (primary tumour + lung

metastases) and resected have a lower survival than those who have a pulmonary relapse (median time:13 months after resection of the primary tumour). The same message appears for for oligo-metastatic patients (1-5 metastases): loco-regional treatment - even in high grade sarcomas – improves the survival of these patients. Median survival of the 243 patients showing these characteristics is 51 months (Thariat et al, abstract 10042).

In contrast to this “aggressive” strategy, mainly applied in younger patients, two papers stress that sarcomas can develop at any age and that management of older patients, even very old ones, with a good performance status induces specific problems which can be very challenging. Median survival in a two-centre series of 189 patients older than 75 (aged up to 93) is of 9.6 months (Garbay Decoopman et al, abstract 10057). Monotherapies (anthracyclines included) can be proposed to these patients (improving median survival) but only to those with a good performance status (PS < 2) and not presenting a Charlson score < 10. Angiosarcomas of the scalp (more frequent in older patients) have a good prognosis compared to other histological sub-types often met at these advanced ages (Hong Hui Quek et al, abstract 10051).

3.1 New targeted drugs/therapeutics

1. **Pazopanib (Votrient, GW786034, Glaxo):** VEGF, PDGF and KIT inhibitor. The PALETTE study was reported last year (ASCO 2011, Van Der Graaf, abstract n°LBA10002) and showed for the very first time in metastatic STS the positive impact of a targeted therapy on the outcome of patients, with an increased PFS by 200% (from 7 to 20 weeks) compared to a placebo (without any cross over) and an increased overall survival of one month (NS). Thanks to this pioneering study pazopanib has just obtained its marketing authorisation in the US and will shortly have full approval in Europe. This drug is the first anti-angiogenic agent registered in metastatic STS. What is new on the topic this year? A new analysis on progression free survival has been performed with a median distance of 25 months: the impact of pazopanib on overall survival remains non significant (from 10.7 months to 12.5 months).

This is mostly due to the number of agents used in both arms of the study to treat therapeutic failure. Curiously, very few patients in the placebo arm were given other anti-angiogenic agents (18% in Europe, 0% in Australia) despite the absence of cross-over in the protocol (Van Der Graaf et al, abstract 10009). Patients recruited in the US were rather more heavily pre-treated than the Europeans or the Asians, and the use of systemic treatments (before or after pazopanib) mainly relies on the reimbursement policy of each country. These agents include trabectedin in Europe, and gemcitabine-taxotere combinations in the US (Marreaud et al, abstract 10067). Note that no predictive factor for better overall survival could be demonstrated. An analysis of metastatic patients' survival, by country, based on their initial management could be useful.

2. mTor inhibiteurs: Analogues of rapamycin, mTOR pathway inhibitor, blocking the intra-cellular pathways of AKT/mTOR/S6kinases are still being actively explored in STS and bone tumours:

a) Ridaforolimus (AP-23573, Ariad, Merck) : results of the phase III randomized trial targeted as a maintenance therapy in non-progressive patients responding to conventional chemotherapy. This was the SUCCEED trial, 711 patients, double blind versus placebo and was reported last year (ASCO 2011, Chawla et al, abstract n°10005) . The median PFS had been significantly increased by 3.1 weeks. With an additional one year follow-up, the absence of benefit in terms of Overall Survival is confirmed (93 weeks with ridaforolimus, 83 weeks in the placebo arm (Blay et al, abstract 10010). The case has been submitted to the competent authorities for a possible registration. To be continued.

b) A combination of sirolimus (3 mg/d) and cyclophosphamide at 200 mg/d one week out of two in advanced chondrosarcoma (Merimsky et al, abstract 10043). Partial response of high quality was obtained in 9 patients with 5 interesting stabilizations.

c) PEComas represent one group of mesenchymal tumours notably comprising angiomiolipomas and lymphangiomyomatosis. They are all very rich in Perivascular Epithelioid Cells (PEC). These PEComas present TSC1 and TSC2 mutations in Bourneville tuberous sclerosis (Vitfell-Pedersen et al, abstract 10038). This is a family of tumours which are particularly sensitive to mTor inhibitors with 3 partial responses in a small series of 9 patients.

3. GDC-0449 (vismodegib, Genentech) : The hedgegog pathway is currently very trendy. No less than two oral papers were dedicated to it:
a) An interesting study was reported this year during an oral session (Italiano et al, abstract 10005) on chondrosarcomas, one of the poorest prognosis sarcomas (highly chemo and radio resistant) and there are no, or very few, industry or academic studies in this histologic subtype. Based on pre-clinical models stressing the over-expression of the Hedgehog pathway in chondrosarcomas and an inhibition of tumour growth in xenograft models, 45 patients have been included in a phase II trial, coordinated by the French Sarcoma Group and supported by the NCI, testing GDC-0449 hedgegog pathway inhibitor (150 mg/d, one oral dose) targeting its binding on the SMO receptor. Among the 30 patients with enough time on study to be evaluated, 9 patients remain non progressive at 6 months. Main toxicity of GDC-0449: dysgeusia (distorted sense of taste). This study illustrates the potential for developing French academic studies with the American academic structures dedicated to rare tumours. Following this route is crucial as there are few patients and the prognosis of these tumours is poor (median survival:18 months for high grade). Mesenchymal and dedifferentiated chondrosarcomas are more chemo-sensitive than the others and allow a poly-chemotherapy approach, especially following a surgical resection – even palliative – to improve prognosis (Bui et al, abstract 10023).

b) The second study (phase Ib) tested the same compound (150 mg only for 3 weeks) in combination with a Notch pathway inhibitor (RO4929097, Roche, two doses: 10 and15 mg) in various subtypes of sarcomas (soft tissue,

osteosarcoma and GIST) (Gounder et al, abstract 10004). 34 patients were included in this study, no objective response, a few with tumour stabilization, no observed limiting dose, hypophosphatemia (low phosphorous levels in blood) as the main side-effect Notch pathway inhibitor and AKT on tumour biopsies. The hedgehog pathway inhibition seems to have a negative influence on pharmacokinetic response of Notch inhibitors However this will have no impact on treatment in humans as the development of RO4929097 has been interrupted by Roche.

4. **Anti-IGFR1**: Mostly abandoned by the pharma industry because of the disappointing results in previous years, one study was reported combining cixutumab (6 mg/kg IV/w) to temsirolimus (25 mg IV/w) (Schwartz et al, abstract 10003) in pre-treated STS and bone sarcomas over-expressing or not the IGF1R receptor. The objective of at least 16 non-progressive patients at 3 months has been reached on each cohort of patients (STS and bone tumours over-expressing IGF1R or not). The results being similar in every cohort, even higher in the group which did not express IGF1R (PFS at 3 months: 42%). Positive effect was most notably observed in IGF1R négative Ewing Sarcomas. We can wonder about the relevance of IHC (immunohisto-chemistry) to select patients and about the real role of this pathway in the tumorigenicity of these tumours ! What if the membrane receptors of the IGFR1 do not really reflect the activation status of this pathway ? The second study associated the same anti-IGF1R and doxorubicin (Chugh et al, abstract 10028) and tested this combination in 30 pre-treated patients with one single therapeutic line. Limiting toxicity : mucositis and hyperglycemia, few FEV diminutions, few rare responses (4/22 évaluables).

5. **Panobinostat.** This Novartis HDAC inhibitor was tested in 53 patients with multi-treated mestastatic STS (Median: 3 therapeutic lines). Initially administered at the dose of 40 mg, 3 times a week, the dose has been decreased to 20mg due to platelet toxicity. (Cassier et al, abstract 10027). The PFS at 3 months (primary endpoint) is 24%, mainly due to the two partial responses which were observed in sex-cord (gonadal) tumours (allowed for

inclusion by this protocol) and to some interesting stabilisations in STS with simple genetics. To be continued? Are we going to move to therapeutic combinations with less thrombocytopenic products and to a study that will only recruit sex-cords tumours?

3.2 Older drugs

1. Trabectedin (Yondelis®, Pharmamar).

a) An interesting paper dealt with the rechallenge by Yondelis® in patients who had already shown a particular sensitivity to trabectedin (Saada et al, abstract 10062). About 2/3 of the patients obtained a new clinical benefit (CR, PR and SD) after the first reintroduction of Yondelis® following documented progression and 1/3 of the patients also responded after a 2nd reintroduction ! Another interesting aspect, toxicities decrease over time due to better acceptance of the product (including adjustments of the dose, treatment intervals etc). The median number of cycles for the first administration until the 3rd rechallenge (4 therapeutic sequences for some patients) is incredibly stable over time (6 cycles per sequence, and up to 21 cycles for the 1st sequence, 30 for the 2nd and 9 for the 3rd one. This is a unique model of conventional chemotherapy, never seen before in Oncology!

b) Using the 4 phase II pioneer studies and based on a simple calculation of tumour control (Growth modulation index: Time to progression under trabectedin divided by the same parameter observed during the previous treatment), 29% of the patients treated WITH Yondelis® present a higher GMI than 1.33, thus giving these patients a significantly prolonged survival (median 23.8 months) vs 9.1 months if GMI is lower than 1 (p=0.0005) (Penel et al, abstract 10013). A study including 227 patients treated within the French Sarcoma Group and with agents considered as active or inactive according to the criteria defined by EORTC, based on PFS at 3 or 6 months (Cousin et al, abstract 10014) showed that objective response influences GMI, and GMI value influences survival (770 days if GMI >1.33, 324 days if GMI <1.

Remarkably, agents considered as inactive according to the criteria of EORTC can and have to be considered as active in some patients whose GMI is higher than 1.33. Is it essential to couple GMI to other standard efficacy/failure measures as a new criteria of evaluation? This model should be confirmed or validated.

c) According to a parallel session organized by Pharmamar during ASCO, Trabectédin could act via the tumour microenvironnement (monocytes, macrophages…). Yondelis® could reduce IL6 secretion and other pro-inflammatory cytokines responsible for the deterioration of cancer patients general condition. This phenomenon was confirmed in a retrospective series (319 patients included in the initial phase II trials): 70% of the patients who had tumour control under Yondelis® also gained weight: 1.2 kgs (d'Incalci et al, abstract 10047). PFS and OS are of 5.1 months and of 21 months when patients gain weight under treatment vs 1.9 and 8.2 months respectively when they don't. To be validated prospectively.

2. Anthracyclines/alkylation products

As in previous years, ASCO 2012 reveals the progressive blurring of the therapeutic arsenal of conventional chemotherapies. Very few papers on these 'old drugs' - the anthracyclines and alkylation products family. It is worth noting:

a) The confirmation of the better sensitivity of uterine leiomyosarcomas with anthracycline based poly-chemotherapies (Hadoux et al, abstract 10098): 47% of objective responses with a therapeutic type API design, 35% of febrile neutropenia (3 toxic deaths), Median PFS of 9.7 months and median survival of 26.6 months.

b) The confirmation of synovial sarcomas high chemo-sensitivity with ifosfamide: 34 patients (median age: 39 years) have been treated with high doses of ifosfamide according to a continuous design: 4g/m2/d, 3 days in a row. 44% of objective responses, including in patients who had already been pre-treated with standard doses (6-9 g/m2), median PFS is of 11.5 months,

some patients could even benefit from secondary resection of their métastases (Rahal et al, abstract 10044). The prolonged administration of ifosfamide (1g/m2/d for 14 days) is also very active in synovial sarcomas even though encephalopathies of all grades are more frequent in this therapeutic design (Alam et al, abstract 10039).

c) A single centre retrospective study (Dana Farber Hospital, Boston) on 99 metastatic patients confirms the global improvement of median survival in these patients: 39 months (Wagner et al, abstract 10061). Every patients showing progression after the first therapeutic line received a second line. 76/99 patients had a 3rd line, 49/99 had 4th line, 34/99 a 5th therapeutic line, and then 30/99 had 6 or more successive therapeutic lines! Median time of administration of these sequential treatments obviously decreases over time.

d) In the session dealing with the analogs of anthracyclines, the Inno-206 (EMCH-doxorubicine) pro-drug of doxorubicin (Chawla et al, abstract 10036) binding on albumin, has been tested in 25 patients. Administered in IV at 3 different doses (from 230 to 450 mg/m2) its efficacy is quite remarkable, 61% of the patients obtained a volumetric reduction of the targeted tumours (38% of PR), including patients who had already received anthracyclines. Maximal recommended dose is 350 mg/m2. No cardiac toxicity, standard hematologic toxicity. To be followed…with a lot of interest!

4. What's up in some histologic subtypes?

4.1. Angiosarcomes/Epithelioid Hemangioendotheliomas

Several papers in this histologic subtype:

a) Angiosarcomas are a very agressive sarcoma subtypes as a FSG retrospective series on 107 patients presenting localized angiosarcoma showed. 46% were grade 3 and median localized relapse free survival was 38% (Lindet et al, abstract 10018). Presence of lymphoedema, a high tumour size and age > 70 yrs lead to a pessimistic prognosis but the outcome of the patients clearly depends on the quality of the initial resection (R0). This has to be differentiated from benign vascular lesions which may

look like an angiosarcoma but never relapse after surgery. (Ravi et al, abstract 10071)

b) Some angiosarcomas occuring in a previously irradiated area present VGFR2 mutations or a MYC or FLT4 amplification (D'Angelo et al, abstract 10019) serving as rationale for the use of sorafenib (Nexavar®, Bayer). This is a pan-tyrosine kinase inhibiting KIT, PDGFR, VEGFR or serines/thréonine kinases (RAS/RAFMEK/ERK) in these pathologies of poor pronosis. 10 female patients with a breast angiosarcoma received sorafenib (initial dose of 400 mg with a dose adjustment based on toxicity), including 6 patients in first line, and the results are quite impressive. 89% clinical benefit including 2 long-term complete responses (median duration of administration: 15 months). A co-amplication of MYC and FLT4 has been found in responders (RC/RP). Are we moving to a molecular biology based selection of angiosarcomas?

c) Sorafenib (Nexavar®, Bayer) has also been tested this year in a STS subtype potentially more sensitive to antiangiogenic factors: Fibrous Solitary Tumours also called Hemangiopericytomas and Epithelioid Hemangioendotheliomas (EHE) (Chevreau et al, abstract 10020). A 6 months PFS of 38% with two responses in EHE was achieved. Sorafenib is an active anti-angiogenic agent in these rare pathologies which are often chemo-resistant but not necessarily radio-resistant (Baldi et al, abstract 10065).

4.2. PVNS

Let's remind ourselves that the efficacy of imatinib has been demonstrated in pigmented villonodular synovitis (PVNS) and in giant cells tumours of the tendons (GCT-TS).

a) After the first therapeutic «proof of concept» in this rare entity (Blay et al, Annals of Oncol, 2008) suggested a chromosome translocation t(1-2)(CSF1-COL6A3) in 2/3 of the cases generating a paracrine accrual of inflammatory cells via their CSF receptor, 2 studies reported at ASCO in 2010 had confirmed the efficacy of imatinib (ASCO 2010, Cassier et al, abstract n°10012, Ravi et al, abstract n°10011). 80% of clinical benefit (objective response, subjective improvement), median PFS: 20

months. This year, a Bayesian study on Nilotinib (via its potential effect on the M-CSF or CSF1 receptors) was reported in these rare tumours (Ray-Coquard et al, abstract 10006). 49 patients included in 16 months in 3 countries, have received nilotinib (800 mg/d), 27 patients have the necessary time on study to be analyzed. The 3 months PFS is 89% with a delayed partial response. After one year, every non-progressive patient stops treatment according to the protocol. Will that be enough treatment? Progression after interruption? Role of surgery of residual lesions, restart of nilotinib/imatinib in case of progression ?

b) An Italian retrospective study on a series of 313 patients suffering from this rare disease: median age: 36 years, knee location (64%), diffuse involvemment of the joint in 69% of the cases, R0, R1 and R2 resection in 51, 28 and 21% respectively. 5 years local RFS is of 66%, significantly influenced by the gender (better in female), tumour size (+/- 5 cm) and, of course, by the quality of the resection (R0 vs R1/R2. TKIs may thus be preferentially used in adjuvant setting, for these risk groups (Palmerini et al, 10022).

5. Fibromatosis/Desmoid Tumours

Compared to the previous years, there were a lot of posters about this benign tumour with local malignancy:

a) A study addressing the issue of pregnancy during the development, the evolution, or the relapse of fibromatoses is a frequent situation in young patients (Fiore et al, abstract 10017). 75 women have been identified in 3 European centers. What are the key messages ? 1) Spontaneous regressions are observed after delivery (10 patients), 2) The discovery of fibromatosis during pregnancy does not impose either a premature birth or an abortion and is not an obstacle to another pregnancy 3) In cases of previous resection, weak rate of relapse in case of pregnancy and 4) a very careful attitude has to be considered in case a desmoid tumour would be discovered in this context.

b) A study confirming a better prognosis for desmoid tumours with no mutation of the beta-catenine gene (Colombo et al, abstract 10016) represented by 24% of the 79 patients analyzed in this study. Only 26% of the WT fibromatoses progress over time, thus allowing more the «wait and see» policy in this group of patients. On the contrary, a nomogram based on the tumour site, the size and the age of the patients may be useful to identify a group of high risk patients who may require systemic treatments (Crago et al, abstract 10015). Young patients with large tumours of the extremities have a higher risk of relapse than the others according to a single centre retrospective study (MSKCC of New-York) on 439 operated patients.

6. Other soft tissue sarcomas

6.1. Well-/De-differentiated liposarcoma

After the anti-mdm2 (RG7112, Nutline, Roche) paper last year looking at well- and de-differentiated localized, operable and locally advanced liposarcomas (ASCO 2011, Ray-Coquard et al, abstract n°10007b) overexpressing and/or amplifying mdm2, the other target of liposarcoma (CDK4, amplified in more than 90% of the cases) was the topic of an oral paper this year (Dickson et al, abstract 10002). 29 patients, progressive after one line of chemotherapy were given PD0332991 (Pfizer – a potent CDK4 and CDK6 inhibitor) 200 mg/d, 2 weeks/3 in liposarcomas amplifying CDK4 by FISH and over-expressing pRb in IHC. 3 months PFS is of 65% and median PFS is of 18 weeks (4.5 months), toxicity is mainly hematologic with 50% grade 3-4 neutropenia and 30% grade 3-4 thrombopenia. According to the authors, these results are so promising that a phase III study now being planned. Let's recall that chemotherapies like trabectedin or gemcitabine result, as 2nd line treatment, in similar median PFS in well- and de-differentiated liposarcomas. To be continued. Are we moving to anti-mdm2- anti-CDK4 combinations or to anti-CDK4 chemotherapies combinations?

6.2. Desmoplastic small round-cell tumour (DSRCT)

A part of the PNET family and underpinned with a EWS-WT1 t(11-22) translocation, affecting young patients (mostly males) in the abdominal region, their prognosis is highly unfavorable despite their high chemo-sensitivity. Two big centers compiled their experience (Subbiah et al, abstract 10021) of 197 cases . Long-term survivors are those who benefit from an «agressive» multi-disciplinary approach including three therapeutic arms: surgery, a Ewing-type chemotherapy, and adjuvant radiotherapy. Patients treated more recently (between 2004-2010) have a 5 year survival around 50% (8% at 5 years for patients treated between 1989 and 2003)

6.3. Chordomas

Like chondrosarcomas, these tumours are highly resistant to everything and their management still relies on a very agressive and often mutilating surgery. The EGFR pathway expressed in these tumours could be a new interesting approach because it is over-expressed in the majority of chordomas (Linden et al, abstract 10024). A cetuximab plus gefitinib or erlotinib combination allowed a neurologic improvement in some patients (4/6) (with some metabolic responses) and for a prolonged duration. Same story with lapatinib: 19 treated patients (1500 mg/d), 15/17 over-espressing this EGFR pathway, no RECIST response but 35% of response (according to Choi), 50% of stabilized disease, median time of benefit 5.5 months. No obvious correlation between response and the type of alteration of the EGFR pathway (Stacchiotti, abstract 10026). Lapatinib seems to be less promising than imatinib in this indication.

6.4. MPNST (Malignant Peripheral Nerve Sheath Tumor)

Should PET-Scan be used to detect MPNST in NF1 patients presenting an increase of a pre-existing tumour or a tumour becoming symptomatic? 98 patients (125 tumours) presenting these characteristics have benefit from a PET-Scan (Combenale et al, abstract 10049) according to strict radiologic criteria (SUV), 42/125 of these tumours were suspicious: 30 of them were confirmed as real MPNST after resection (positive predictive value of PET: 71%). On the contrary, 82/83 lesions considered as non suspicious by functional imaging were benign tumours (negative predictive value: 99%). In order to avoid surgery of every progressive neurofibroma,

PET-Scan could thus become a very useful predictive tool. To be followed. In contrast, the role of PET-scan is still controversial and vague in the early evaluation of an induction chemotherapy in STS in general (Hermann et al, abstract 10012).

SPAEN Sarcoma Patients EuroNet Assoc. is the European Network of Sarcoma, GIST, and Desmoid Patient Advocacy Groups. Acting in partnership with medical experts, scientific researchers, the healthcare industry and other stakeholders, SPAEN works to improve treatment and care of GIST, Desmoid and sarcoma patients in Europe through improving information and support, and by increasing the visibility of sarcoma with policymakers and the public.
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