

Tests, treatments and procedures at risk of inappropriateness in Italy
that Physicians and Patients should talk about.

Five Recommendations from Italian Association of Nuclear Medicine and Molecular Imaging (AIMN)

1	<p>Don't use brain SPECT (Single photon emission computed tomography) with DAT (dopamine transporter) radiopharmaceuticals in the differential diagnosis of degenerative Parkinsonisms or to convince a patient with Parkinson's disease that he/she is really affected with that disease.</p> <p>Although some papers in the literature have shown mild to moderate striatal uptake differences between the several forms of degenerative Parkinsonisms at group level, there is a considerable overlap at individual level and thus it is very unlikely that brain SPECT using DAT radiopharmaceuticals can guide the differential diagnosis between Parkinson's disease, dementia with Lewy bodies, multisystem atrophy, progressive supranuclear palsy and corticobasal degeneration. If the differential diagnosis between these diseases was the case, other examinations are much more accurate, such as PET (Positron Emission Tomography) with 18F-Fluorodeoxyglucose (FDG) and cardiac scintigraphy with 123I- MIBG. Moreover, in the case the clinical picture fully matches the criteria for the diagnosis of Parkinson's disease and the patient responds to dopaminergic treatment in the proper way, diagnostic confirmation with SPECT and DAT radiopharmaceutical is not needed. This examination should be limited to the cases in whom the clinical picture and/or the poor response to dopaminergic treatment raise the question whether the patient is really affected by Parkinson's disease (or another degenerative Parkinsonism) or instead by a non-degenerative Parkinsonism (i.e., .: jatrogenic, psycogenic, or vascular). The inappropriate use of brain SPECT with DAT radiopharmaceuticals has contributed to cause long waiting lists that are usually of several months, thus prolonging the diagnostic procedure for those patients who instead really need the result of this examination in order to receive a correct diagnostic judgment and subsequent proper treatment.</p>
2	<p>Don't use 18F-FDG (Fluorodeoxyglucose) PET-CT as a "screening" test for cancer in healthy subjects.</p> <p>According to our North-America colleagues (SNMMI) we suggest that 18F-FDG (fluorodeoxyglucose) PET-CT must not be applied as a screening test for cancer. At the moment the use of PET-CT in oncology is appropriated only in the presence of a reasonable doubt of cancer according to clinical and laboratory findings. The use as screening test in large healthy population is not advisable due to the low probability to find a cancer in these subjects (inferior to 1%), in the face of a significant number of false positive lesions to be characterized using other diagnostic techniques also invasive and hazardous (biopsy or surgery)</p>
3	<p>Don't perform PET/CT with [18F]FDG (Fluorodeoxyglucose) in suspected peripheral osteomyelitis and in differential diagnosing between acute and chronic infection.</p> <p>Since [18F] FDG-PET/CT showed high sensibility in the diagnosis of spondylitis and spondylodiscitis, some Nuclear Medicine physicians may substitute scintigraphy with labelled white blood cell with this technique in every infectious disease. Labelled white blood cell represent however the gold standard nuclear medicine imaging for acute infection-inflammation diagnosis.</p>
4	<p>Don't perform lymphoscintigraphy and radioguided biopsy of the sentinel node in patients affected by cutaneous melanoma thinner than 0.75 mm, with no ulceration and mitotic rate <1/mm²</p> <p>The treatment of choice for these patients is adequate surgical removal alone of the primitive tumour. Given the optimal prognosis (97% survival at 10 years), radioguided biopsy of the sentinel node would imply useless exposure to ionizing radiations, as well as surgical "overtreatment" of selective removal of the sentinel node. The NCCN guidelines (version 4.2014) indicate that the search for the sentinel node, at any anatomical site, can be considered on an individual basis in patients with melanomas of thickness between 0.75 and <1 mm with at least 1 mitosis/mm² or with ulceration, and for all melanomas of thickness between 1 and 4 mm. Biopsy of the sentinel node can be recommended for staging and to facilitate loco-regional control of the disease in patients with T4 melanoma or > 4 mm of Breslow thickness. It is important that the search for the sentinel node is discussed case by case in a multidisciplinary context, taking into account other prognostic variables including age, sex and site of the lesion, which can guide the decision-making process.</p>
5	<p>Don't treat with radioiodine low-risk differentiated thyroid carcinomas (namely "microcarcinomas" or carcinomas <1 cm, in the absence of unfavorable prognostic factors), after total thyroidectomy</p> <p>Both the literature and the guidelines of the American Thyroid Association and the European Association of Nuclear Medicine (EANM) agree on this position. However, established clinical practice does not correspond to this "official" position, and, in many cases, considerations of "defensive" medicine prevail, according to which, a radioiodine dose, to eliminate the small thyroid residue, should not be denied to anyone. Current legislation (Legislative Decree 187/00) requires that these therapies are carried out as in-patient treatments. Therefore, to include in waiting lists patients with inappropriate indications has an impact not only from the point of view of the ethical and ecological sustainability (radiation protection), but also in terms of cost / effectiveness</p>

Please note that these items are provided only for information and are not intended as a substitute for consultation with a clinician. Patients with any specific questions about the items on this list or their individual situation should consult their clinician.

How this list was created

The 5 recommendations reported were defined by 5 Task Groups of our Association. Each Task Group evaluated a nuclear medicine practice, commonly performed in Italy, with relevant data and clinical evidence to consider its use as inappropriate, because of lack of important benefits to the patients or approaching overtreatment. The impact of these inappropriate practices on cost management is not relevant as the number of Nuclear Medicine procedures commonly performed is far less than that of all Diagnostic Imaging tests. Nevertheless inappropriate exam prescription may critically affect waiting lists causing a low adherence in timing to treatment planning standard (e.g. 18F-FDG PET in preoperative staging, treatment response evaluation after chemotherapy etc.). Even though Nuclear Cardiology procedures, a real core-business activity of the Nuclear Medicine Departments, are not included in the recommendations, we suggest that these procedures should be carefully monitored in order to avoid inappropriateness and to focus on specific disease issues and functional timing which is crucial for patient workup while adhering to appropriateness criteria. As an example, it is still a major concern that many interventional procedures are performed in the absence of a clearcut documentation of ischemia but only by means of anatomical data: this is obviously the exemplification where "doing best" would be much better than "doing less".

Sources

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Slow Medicine, an Italian movement of health professionals, patients and citizens promoting a Measured, Respectful and Equitable Medicine, launched the campaign "**Doing more does not mean doing better-Choosing Wisely Italy**" in Italy at the end of 2012, similar to Choosing Wisely in the USA. The campaign aims to help physicians, other health professionals, patients and citizens engage in conversations about tests, treatments and procedures at risk of inappropriateness in Italy, for informed and shared choices. The campaign is part of the Choosing Wisely International movement. Partners of the campaign are the National Federation of Medical Doctors' and Dentists' Orders (FNOMCeO), that of Registered Nurses' Orders (FNOPI), the Academy of Nursing Sciences (ASI), National Union of Radiologists (SNR), Tuscany regional health agency, PartecipaSalute, Altroconsumo, the Federation for Social Services and Healthcare of Aut. Prov. of Bolzano, Zadig. www.choosingwiselyitaly.org; www.slowmedicine.it

The **Italian Association of Nuclear Medicine - AIMN** was founded in 1990 and is the institutional referral association for Nuclear Medicine practice and Molecular Imaging in Italy. The goals pursued by the Association are the promotion of scientific development and the application of the physical properties of the nuclear atom of radionuclides to the field of medicine and biology. www.aimn.it