Background (MAK6011)

Concept No:	MAK2007006
Project Number:	MAK6011
Title:	Introducing Positron Emission Tomography (PET) in Clinical Practice
Original Language Title:	
Submitted By:	Member State and/or Observers With Rights
Classification:	Ongoing
FOA:	6B Nuclear Medicine Imaging
FOA Distribution:	These is No FOA Code Distribution.
Link to RB Programme:	These is No Regular Budget Link.
APC Code(s) (Pre-2012 Projects):	F Human Health
Participating Member States(s):	The Frmr.Yug.Rep. of Macedonia
Project duration (Total number of years):	No value entered.
Project duration (Actual Start date):	2009-02-27
Justification: **(Pre-2012 Projects)**	Positron emission tomography (PET) is a major diagnostic imaging technique predominantly used in determining the presence and severity of cancers, neurological conditions, and cardiovascular diseases. It is currently the most effective way to check for cancer recurrences and it offers significant advantages over other forms of imaging such as computed tomography (CT) or magnetic resonance imaging (MRI) scans in detecting disease in many patients. In the USA, an estimated 1 129 900 clinical PET patient studies were performed at 1725 sites in 2005. PET and cancer: PET is considered particularly effective in identifying whether cancer is present or not, if

it has spread, if it is responding to treatment, and if a person is cancer-free after treatment. Cancers for which PET is considered particularly effective include lung, head and neck, colorectal, oesophageal, lymphoma, melanoma, breast, thyroid, cervical, pancreatic and brain cancer as well as other less frequently occurring cancers. Early detection: Because PET images biochemical activity, it can accurately characterize a tumour as benign or malignant, thereby avoiding surgical biopsy when the PET scan is negative. Conversely, because a PET scan images the entire body, confirmation of distant metastasis can alter treatment plans in certain cases from surgical intervention to chemotherapy. Staging of cancer: PET is extremely sensitive in determining the full extent of disease, especially in lymphoma, malignant melanoma, breast, lung, colon and cervical cancers. Confirmation of metastatic disease allows the physician and patient to more accurately decide how to proceed with the patient's management. Checking for recurrences: PET is currently considered to be the most accurate diagnostic procedure to differentiate tumour recurrences from radiation necrosis or post-surgical changes. Such an approach allows for the development of a more rational treatment plan for the patient.

Sustainability:

(Pre-2012 Projects)

The proven interest and deep involvement of main stakeholders like the Ministry of Health and the Ministry of Education has secured funding for the success of this project and its sustainability since the procedure will be reimbursed by the Health Insurance Fund.

End users:

(Pre-2013 Projects)

End users include the Ministry of Health and the hospital; beneficiaries will include patients affected by cancer conditions through better management of their disease. Financial savings will be possible through an improved diagnostic work-up, which will allow a better treatment option selection. Clinicians and referring physicians involved in cancer management will have a powerful tool to manage their patients.

Strategy:

(Pre-2013 Projects)

The feasibility study performed under MAK6009 showed the need for careful planning and human resources capacity building. The Government ensured cost sharing for the radiopharmacy and has already started procurement of major components, the PET scanner and the cyclotron. The project will complement Government activities with expert advice and training of medical doctors, medical physicists, technologists and radiopharmacists.