# **NUCLEAR MEDICINE Syllabus, 2020/2021 for the 4th year, 6-year programme, group 2**

# Coordinator: Małgorzata Trofimiuk-Müldner

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# Department of Endocrinology JUMC, ul. Kopernika 17, 31-501 Krakow

Venue: CDK, Łazarza 16.

Total number of hours – 20

To get credit in nuclear medicine, the presence and active contribution are required. Credit will be awarded based on:

- the obligatory short test results (at least 50% of correct answers, the test will be scheduled on the last day of seminars)

- the attendance of 80%.

**1. Day 1 – May 3rd, 2021 Monday- National Holiday**

**2. Day 2 – May 4th, 2021 (11.00-15.00)** **Tuesday, CDK, Lecture Hall A**

* Principles of nuclear medicine 2: imaging principles – scintigraphy including SPECT, PET, hybrid systems SPECT/CT, PET/CT, PET/MRI. (45 minutes) – *Wioletta Lenda-Tracz, M.Sc., PhD.*
* Principles of nuclear medicine 3: radiation protection. (45 minutes) – *Wioletta Lenda-Tracz, M.Sc., PhD.*
* Neuroendocrine neoplasms (NEN): role of nuclear medicine in diagnostics and therapy (PRRT).\* (90 minutes) – *Marta Opalińska, MD, PhD.*
* Urogenital system imaging (focus on kidney scintigraphy and PET in prostate cancer). Imaging of liver haemangiomas. (45 minutes) - *Marta Opalińska, MD, PhD.*

**3. Day 3 – May 5th, 2021 (11.00-15.30) Wednesday,**

* Principles of nuclear medicine 1: definition of nu **CDK, Lecture Hall A** clear medicine; ionizing radiation, types of radiation, radioisotopes for diagnostics and treatment, production of isotopes, radiotracers/radiopharmaceuticals. (90 minutes) - *Ibraheem Al Maraih, MD.*
* Thyroid cancer: from diagnosis to therapy and follow up.\* (90 minutes) – *Małgorzata Kieć-Klimczak, MD, PhD.*
* PET-CT in oncology. (90 minutes) - *Małgorzata Kieć-Klimczak, MD, PhD.*

**4. Day 4 – May 6th, 2021 (11.00-15.00) Thursday CDK, Lecture Hall A**

* Central nervous system imaging (dementia, degenerative movement disorders (Parkinson’s disease and Parkinsonian syndromes), epilepsy). (45 minutes) - *Ibraheem Al Maraih, MD.*
* Nuclear cardiology (myocardial perfusion imaging – SPECT, PET; myocardial viability imaging).\* (90 minutes) *- Ibraheem Al Maraih, MD.*
* Other applications of nuclear medicine in endocrinology: parathyroid imaging, pheochromocytoma and paraganglioma imaging and therapy (45 minutes) *- Ibraheem Al Maraih, MD.*
* Introduction to immunoscintigraphy. Basics of nuclear imaging of inflammation. Sentinel lymph nodes imaging. (45 minutes) *- Ibraheem Al Maraih, MD.*

**5. Day 5 – May 7th, 2021 (11.00-14.45) Friday CDK, Lecture Hall A**

* Benign thyroid diseases and nuclear medicine (diagnostics and therapy).\* (90 minutes) - *Marta Opalińska, MD, PhD.*
* Nuclear imaging of bones (bone scintigraphy, NaF PET/CT). Therapy of bone metastases. Radionuclide synovectomy.\* (90 minutes) - *Marta Opalińska, MD, PhD*.
* Test

Notice: \* - seminar with a case presentation included

# **NUCLEAR MEDICINE Syllabus, 2020/2021 for the 4th year, 6-year programme, group 1**

# Coordinator: Małgorzata Trofimiuk-Müldner

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# Department of Endocrinology JUMC, ul. Kopernika 17, 31-501 Krakow

Venue: CDK, Łazarza 16.

Total number of hours – 20

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- the attendance of 80%.

**1. Day 1 – May 17th, 2021 (11.00-14.15) Monday, CDK, Lecture Hall A**

* Principles of nuclear medicine 1: definition of nuclear medicine; ionizing radiation, types of radiation, radioisotopes for diagnostics and treatment, production of isotopes, radiotracers/radiopharmaceuticals. (90 minutes) - *Ibraheem Al Maraih, MD.*
* Principles of nuclear medicine 2: imaging principles – scintigraphy including SPECT, PET, hybrid systems SPECT/CT, PET/CT, PET/MRI. (45 minutes) – *Wioletta Lenda-Tracz, M.Sc., PhD.*
* Principles of nuclear medicine 3: radiation protection. (45 minutes) – *Wioletta Lenda-Tracz, M.Sc., PhD.*

**2. Day 2 – May 18th, 2021 (11.00-14.15)** **Tuesday, CDK, Lecture Hall A**

* Neuroendocrine neoplasms (NEN): role of nuclear medicine in diagnostics and therapy (PRRT).\* (90 minutes) – *Marta Opalińska, MD, PhD.*
* Nuclear imaging of bones (bone scintigraphy, NaF PET/CT). Therapy of bone metastases. Radionuclide synovectomy.\* (90 minutes) - *Marta Opalińska, MD, PhD*.

**3. Day 3 – May 19th, 2021 (11.00-15.00) Wednesday CDK, Lecture Hall A**

* Thyroid cancer: from diagnosis to therapy and follow up.\* (90 minutes) – *Małgorzata Kieć-Klimczak, MD, PhD.*
* PET-CT in oncology. (90 minutes) - *Małgorzata Kieć-Klimczak, MD, PhD.*

**4. Day 4 – May 20th, 2021 (11.00-15.00) Thursday 11-13.00 CDK Lec Hall C /13-15.00 S1**

* Central nervous system imaging (dementia, degenerative movement disorders (Parkinson’s disease and Parkinsonian syndromes), epilepsy). (45 minutes) - *Ibraheem Al Maraih, MD.*
* Nuclear cardiology (myocardial perfusion imaging – SPECT, PET; myocardial viability imaging).\* (90 minutes) *- Ibraheem Al Maraih, MD.*
* Other applications of nuclear medicine in endocrinology: parathyroid imaging, pheochromocytoma and paraganglioma imaging and therapy (45 minutes) *- Ibraheem Al Maraih, MD.*
* Introduction to immunoscintigraphy. Basics of nuclear imaging of inflammation. Sentinel lymph nodes imaging. (45 minutes) *- Ibraheem Al Maraih, MD.*

**5. Day 5 – May 21st , 2021 (11.00-14.00) Friday CDK, Lecture Hall C**

* Benign thyroid diseases and nuclear medicine (diagnostics and therapy).\* (90 minutes) - *Marta Opalińska, MD, PhD.*
* Urogenital system imaging (focus on kidney scintigraphy and PET in prostate cancer). Imaging of liver haemangiomas. (45 minutes) - *Marta Opalińska, MD, PhD.*
* Test

Notice: \* - seminar with a case presentation included

# **NUCLEAR MEDICINE Syllabus, 2020/2021 for the 4th year, 6-year programme, group 3**

# Coordinator: Małgorzata Trofimiuk-Müldner

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# Department of Endocrinology JUMC, ul. Kopernika 17, 31-501 Krakow

Venue: CDK, Łazarza 16.

Total number of hours – 20

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- the attendance of 80%.

1. **Day 1 – May 31st, 2021 (11.00-15.30) Monday, CDK, Lecture Hall A**

* Principles of nuclear medicine 2: imaging principles – scintigraphy including SPECT, PET, hybrid systems SPECT/CT, PET/CT, PET/MRI. (45 minutes) – *Wioletta Lenda-Tracz, M.Sc., PhD.*
* Principles of nuclear medicine 3: radiation protection. (45 minutes) – *Wioletta Lenda-Tracz, M.Sc., PhD.*
* Principles of nuclear medicine 1: definition of nuclear medicine; ionizing radiation, types of radiation, radioisotopes for diagnostics and treatment, production of isotopes, radiotracers/radiopharmaceuticals. (90 minutes) - *Ibraheem Al Maraih, MD.*
* Nuclear cardiology (myocardial perfusion imaging – SPECT, PET; myocardial viability imaging).\* (90 minutes) *- Ibraheem Al Maraih, MD.*

1. **Day 2 – June 1st, 2021 (11.00-15:15)** **Tuesday, CDK, Lecture Hall A**

* Neuroendocrine neoplasms (NEN): role of nuclear medicine in diagnostics and therapy (PRRT).\* (90 minutes) – *Marta Opalińska, MD, PhD.*
* Introduction to immunoscintigraphy. Basics of nuclear imaging of inflammation. Sentinel lymph nodes imaging. (45 minutes) *- Ibraheem Al Maraih, MD.*
* Other applications of nuclear medicine in endocrinology: parathyroid imaging, pheochromocytoma and paraganglioma imaging and therapy (45 minutes) *- Ibraheem Al Maraih, MD.*
* Central nervous system imaging (dementia, degenerative movement disorders (Parkinson’s disease and Parkinsonian syndromes), epilepsy). (45 minutes) - *Ibraheem Al Maraih, MD.*

**3. Day 3 – June 2nd, 2021 (11.00-14.00) Wednesday, CDK, Lecture Hall A**

* Thyroid cancer: from diagnosis to therapy and follow up.\* (90 minutes) – *Małgorzata Kieć-Klimczak, MD, PhD.*
* PET-CT in oncology. (90 minutes) - *Małgorzata Kieć-Klimczak, MD, PhD.*

**4. Day 4 – June 3rd, 2021 Thursday – Corpus Christi**

**5. Day 5 – June 4th , 2021 (11.00-15.15) Friday, CDK, Lecture Hall B**

* Nuclear imaging of bones (bone scintigraphy, NaF PET/CT). Therapy of bone metastases. Radionuclide synovectomy.\* (90 minutes) - *Marta Opalińska, MD, PhD*.
* Benign thyroid diseases and nuclear medicine (diagnostics and therapy).\* (90 minutes) - *Marta Opalińska, MD, PhD.*
* Urogenital system imaging (focus on kidney scintigraphy and PET in prostate cancer). Imaging of liver haemangiomas. (45 minutes) - *Marta Opalińska, MD, PhD.*
* Test

Notice: \* - seminar with a case presentation included