

# Endocrine Abstracts

September 2020 Volume 70  
ISSN 1479-6848 (online)

22nd European Congress of  
Endocrinology

5-9 September 2020, European Society of Endocrinology

**eECE 2020**  
22nd European Congress of Endocrinology



published by  
**bioscientifica**

Online version available at  
[www.endocrine-abstracts.org](http://www.endocrine-abstracts.org)



## 22<sup>nd</sup> European Congress of Endocrinology 5-9 September 2020, European Society of Endocrinology

### EDITORS

Abstracts were marked by the Abstract Marking Panel and selected by the Programme Organising Committee

### e-ECE 2020 Mini-Programme Organising Committee

Andrea Giustina (Italy), **ESE President**  
Martin Reincke (Germany), **ESE President-Elect**  
Bulent Yildiz (Turkey), **ESE Treasurer (until May 2020)**  
Riccarda Granata (Italy), **ESE Congress Committee Chair**

Attila Balázs Patócs (Hungary), **2020 POC Co-Chair**  
Jens Otto Lunde Jørgensen (Denmark), **2020 POC Co-Chair**  
Daniela Cota (France), **2021 POC Co-Chair**  
Lars Rejnmark (Denmark), **2021 POC Co-Chair**

Ljiljana Marina (Serbia), **EYES Chair**  
Manel Puig Domingo (Spain), **2020 POC Member**  
Mónica Marazuela (Spain), **ESE Secretary**

### Programme Organising Committee

Riccarda Granata (Italy), **ESE Congress Committee Chair**  
Jens Otto Lunde Jørgensen (Denmark), **Clinical Co-Chair**  
Attila Balázs Patócs (Hungary), **Basic Science Co-Chair**  
Michal Kršek (Czech Republic), **Local Organising Committee Chair**  
Zhanna Belaya (Russian Federation)  
Nienke Biermasz (The Netherlands)  
Jens Bollerslev (Norway)

Daniela Cota (France)  
Ashley Grossman (UK)  
Csilla Krausz (Italy)  
Madalina Musat (Romania)  
Uberto Pagotto (Italy)  
Agnieszka Piekliko-Witkowska (Poland)  
Vincent Prevot (France)  
Manel Puig-Domingo (Spain)

Lars Rejnmark (Denmark)  
Mark Sherlock (Ireland)  
Marilyn Theodoropoulou (Germany)  
Pierre Val (France)  
AJ van der Lely (The Netherlands)  
Wim van Hul (Belgium)  
Greisa Vila (Austria)  
Maria Chiara Zatelli (Italy)

### Ex Officio Members

Andrea Giustina (Italy), **ESE President**  
Martin Reincke (Germany), **ESE President-Elect**  
Bulent Yildiz (Turkey), **ESE Treasurer (until May 2020)**  
Wiebke Artl (UK), **Editor in Chief, European Journal of Endocrinology**

Josef Köhrle (Germany), **Editor in Chief, Endocrine Connections**  
Felix Beuschlein (Switzerland), **ESE Clinical Committee Chair**  
Robin Peeters (Switzerland), **ESE Science Committee Chair**  
Riccarda Granata (Italy), **ESE Congress Committee Chair**

Marek Ruchala (Poland), **ECAS Representative**  
Mehul Dattani (UK) (Switzerland), **ESPE Representative**  
Luis Cardoso (Portugal), **EYES Representative**

### Abstract Marking Panel

Marker Name	Country	L Czupryniak Poland	D Grigorie Romania	M Krsek Czech Republic	N Papanas Greece	E Shestakova Russia
M Alevizaki Greece		J Dahlgren Sweden	P Groop Finland	A Kurylowicz Poland	A Patócs Hungary	M Shestakova Russia
K Amrein Austria		P Dahlgvist Sweden	A Grossman UK	E Lalli France	R Peeters The Netherlands	M Simoni Italy
C Andoniadou UK		C Daousi UK	L Groussin France	B Langdahl Denmark	S Pekic Serbia	J Skrha Austria
G Assié France		M Dattani UK	G Gruden Italy	B Lapauw Belgium	N Pellegata Germany	P Soares Portugal
S Babajko France		C Dayan UK	L Guasti UK	J Laven The Netherlands	L Perez-Rivas Germany	A Solini Italy
C Badiu Romania		J de Castro Portugal	M Haluzik Czech Republic	G Lavery UK	H Perrild Denmark	A Spada Italy
A Baranowska-Bik Poland		W de Herder The Netherlands	R Hampl Czech Republic	L Laviola Italy	L Persani Italy	J Spranger Germany
A Barlier France		E de Koning The Netherlands	V Hána Czech Republic	L Lazurova Slovakia	G Perseghin Italy	A Spyrgioulou Germany
K Basham USA		W Dhillon UK	F Hannan UK	H Lefebvre France	M Petakov Serbia	G Stalla Germany
A Beckers Belgium		G Di Dalmazi Germany	A Heck Norway	J Leger France	A Piekliko-Witkowska Poland	E Stener-Victorin Sweden
P Beck-Peccoz Italy		E Diamanti-Kandarakis Greece	M Heikinheimo Finland	T Links The Netherlands	V Pirags Latvia	C Strasburger Germany
Z Belaya Russia		C Dieguez Spain	A Hoellich Germany	P Lips The Netherlands	C Poiana Romania	C Stratakis USA
J Bertherat France		E Dirinck Belgium	L Holland The Netherlands	S Llahana UK	R Poladian Lebanon	A Tabarin France
M Bidlingmaier Germany		M Donath Switzerland	A Hubalewska-Dydejczyk Poland	A Luger Austria	S Polyzos Greece	T Tankova Bulgaria
N Biermasz The Netherlands		J Drouin Canada	I Huhtaniemi UK	S Lund Denmark	P Poplawski Poland	M Tena-Sempere Spain
W Bik Poland		L Duntas Greece	E Husebye Norway	R Luque Spain	V Popović Serbia	N Tentolouris Greece
K Birkeland Norway		A Dwyer USA	P Igaz Hungary	D Macut Serbia	M Porta Italy	M Terzolo Italy
K Boelaert UK		G Eisenhofer Germany	I Ilvovskaya Russia	D Maiter France	M Poutanen Finland	M Theodoropoulou Germany
J Boguslawska Poland		V Elian Romania	E Isenovic Serbia	E Mamedova Russia	D Power Portugal	C Thompson Ireland
J Bollerslev Norway		F Fallo Italy	M Jaffrain-Rea Italy	M Mannelli Italy	M Puig Domingo Spain	H Timmers The Netherlands
R Bouillon Belgium		M Fassnacht Germany	B Jarzab Poland	E Mannucci Italy	C Quarta France	M Toth Hungary
M Brandt Italy		J Favier France	K Jazdzewski Poland	F Mantero Italy	S Radian Romania	P Touraine France
D Branisteanu Romania		R Feelders The Netherlands	N Jessen Denmark	G Mantovani ITALY	O Ragnarsson Sweden	R Trifanescu Romania
K Briot France		U Feldt-Rasmussen Denmark	D Jezova Slovakia	M Marazuela Spain	N Rahman Finland	A Tsapas Greece
T Brue France		F Fernandes Rosa France	G Johansson Sweden	L Marina Serbia	E Rajpert-De Meyts Denmark	E Tsourdi Germany
G Brunetti Italy		S Fica Romania	A Jørgensen Norway	N Matikainen Finland	M Rauner Germany	MTzanela Greece
C Buchanan UK		E Fliers The Netherlands	J Jørgensen Denmark	C McCabe UK	G Raverot France	E Valassi Spain
P Burman Sweden		S Franks UK	U Kaiser USA	O Meijer The Netherlands	M Reincke Germany	G Valk The Netherlands
H Butz Hungary		W Fraser UK	G Kallitsa Greece	L Metherell UK	L Rejnmark Denmark	E van den Akker The Netherlands
S Cannavo Italy		J Frystyk Denmark	C Kanaka-Gantenbein Greece	D Miljic Serbia	S Rice UK	erlands
J Cap Czech Republic		L Fugazzola Italy	G Kanakis Greece	J Mittag Germany	M Robledo Spain	A van der Lely The Netherlands
C Capatina Romania		C Fuà Germany	T Kararup Hansen Denmark	N Moller Denmark	P Rodien France	J van Eck The Netherlands
M Caprio Italy		F Gabalec Czech Republic	D Karasek Czech Republic	L Morin-Papunen Finland	H Romijn The Netherlands	W van Hul Belgium
P Caron France		S Gaberšček Slovenia	N Karavitaki UK	A Mukherjee UK	C Ronchi Italy	M Vantyghem France
J Castaño Spain		M Gabete Spain	A Karlsson Sweden	M Musat Romania	R Ross UK	G Vila Austria
H Cederberg-Famminen Finland		R Gärtner Germany	S Kaser Austria	E Nagy Hungary	R Roussel France	E Visser The Netherlands
O Chabre France		B Gatta Cherifi France	D Kastelan Croatia	S Neggers The Netherlands	N Rucci Italy	J Visser The Netherlands
P Chanson France		L Gennari Italy	J Kaufman Belgium	J Newell-Price UK	M Ruchala Poland	V Volke Estonia
K Chatterjee UK		M Gheorghiu Romania	M Keil USA	N Nicolaidis Greece	E Rutten Belgium	J Widimsky Czech Republic
N Cherradi France		I Gherlan Romania	F Kelestimur Turkey	D Niculescu Romania	S Sanack Turkey	W Wiersinga The Netherlands
M Chiara Zatelli Italy		P Giacobini France	R Kineman USA	M Niedziela Poland	D Santi Greece	I Wilkinson UK
F Chiarelli Italy		J Giordano Italy	T Kocjan Slovenia	R Nogueiras Spain	P Saunders UK	P Williams Germany
J Chowen Spain		A Giustina Italy	J Kopchick USA	B Obermayer-Pietsch Austria	C Schalin-Jäänti Finland	S Wudy Germany
S Christin-Maitre France		M Godlewska Poland	M Korbonits UK	C Olareus Norway	S Schmid Germany	P Yeoh UK
M Cohen-Solal France		J Gomez-Ambrosi Spain	B Kos-Kudla Poland	P Oliveira Portugal	J Schopohl Germany	B Yildiz Turkey
D Cota France		D Goulis Greece	C Krausz Italy	D Olsson Sweden	D Schulte Germany	M Zarkovic Serbia
D Cuthbertson UK		R Granata Italy	M Kroiss Germany	K Øystese Norway	P Schwarz Denmark	M Zennaro France
		C Gravholt Denmark	N Krone UK	U Pagotto Italy	M Sherlock Ireland	

The European Society of Endocrinology would like to thank its Corporate Members and the sponsors of e-ECE 2020.

**Premium Corporate Members**

Akcea Therapeutics  
Ipsen  
Pfizer  
Recordati Rare Diseases Sarl  
Takeda

**Corporate Members**

Advanced Accelerator Applications  
Amryt Pharmaceuticals (formerly Aegerion)  
Diurnal  
HRA Pharma  
Kyowa Kirin International  
Merck Serono  
Novo Nordisk  
Sandoz International GmbH  
Siemens-Healthineers  
Strongbridge Biopharma  
Uni-Pharma

**Supporters**

Chiasma  
Crinetics Pharmaceuticals  
Isotopen Technologien Munchen AG

**Gold Sponsors**

Ipsen  
Pfizer  
Takeda

**Silver Sponsor**

Recordati Rare Diseases

**Bronze Sponsors**

Advanced Accelerator Applications  
Amryt Pharma  
HRA Pharma Rare Diseases  
Kyowa Kirin  
Novo Nordisk



European Society of Endocrinology  
Starling House, 1600 Parkway  
North, Bristol, BS34 8YU, UK

Tel: +44 (0) 1454 642247  
Fax: +44 (0) 1454 642222  
E-mail: [info@euro-endo.org](mailto:info@euro-endo.org)  
Website: <http://www.endocrinology.org>



**Congress Secretariat:**

Bioscientifica Ltd  
Starling House, 1600 Parkway  
North, Bristol, BS34 8YU, UK

Tel: +44 (0)1454 642240  
Fax: +44 (0)1454 642222  
E-mail: [ece2020@endocrinology.org](mailto:ece2020@endocrinology.org)  
Website: [www.ece2020.org](http://www.ece2020.org)

For statistical analysis, we used IBM SPSS v.21 and MaxStat v.3.6. We applied non-parametric tests and defined  $P < 0.5$  as significant.

#### Results

Of 12 703 samples, 430 (3.4%) met the inclusion criteria. Of these, 398 had available serum for precipitation with PEG. Patients with initial TSH  $< 15$  mU/l were younger than those with TSH 15 mU/l or above ( $P = 0.03$ ). The group with recovered TSH percentage of up to 24% ( $n = 106$ ) had a lower initial TSH value when compared with 25% or higher ( $n = 292$ ) ( $P = 0.01$ ). Older age (50 and older,  $n = 200$ ) was associated with a higher level of monomeric TSH ( $P = 0.003$ ). The initial TSH values of 7.77 mU/l or above had tendency towards higher value of monomeric TSH ( $P = 0.066$ ).

#### Conclusions

Our results suggest there could be a potential role for monomeric TSH determination prior to treatment initiation for subclinical hypothyroidism, mainly in young patients. The main strong point of our study is its real-world setting. The limitations are that we did not take into account the patients' background and treatment; we also did not have a possibility to use gel filtration chromatography which is considered a gold standard for monomeric TSH determination. At the next stage, we are planning to compare these results with a group of patients who have normal TSH values.

DOI: 10.1530/endoabs.70.AEP918

### AEP919

#### The effects of naringenin on NRF2 and antioxidant enzymes expressions in the thyroids of the old-aged Wistar rats

Marko Miler<sup>1</sup>, Jasmina Živanović<sup>1</sup>, Vladimir Ajdžanović<sup>1</sup>, Branka Šošić-Jurjević<sup>1</sup>, Zorica Marković<sup>2</sup> & Verica Milošević<sup>1</sup>

<sup>1</sup>University of Belgrade, Institute for Biological Research 'Siniša Stanković' – National Institute of Republic of Serbia, Cytology, Belgrade, Serbia; <sup>2</sup>Clinical Hospital Center 'Dr Dragiša Mišović-Dedinje', Department of Endocrinology, Belgrade, Serbia

Citrus flavanone naringenin (NAR) is a potent antioxidant with ability to change pituitary-thyroid function. NAR increases concentration of thyroid-stimulating hormone (TSH) in serum by increasing Sirtuin1 expression in the pituitary thyrotrophs and improves thyroid hormonogenesis capacity in old-aged rats. Thyroid hormone production is followed by generation of large quantities of reactive oxygen species (ROS) which are essential for iodine organification. A master regulator of redox status, NRF2 protein, together with antioxidant enzymes (AOE), is responsible for maintenance of redox/antioxidant balance in the cell. Considering that NRF2 expression can be affected by NAR, besides TSH, the study aim is to analyze gene and protein expressions of NRF2 and AOE in the thyroids of 24-month-old male Wistar rats. NAR was suspended in sunflower oil (vehicle) and administered directly to the oral cavity, at a dose of 15 mg/kg b.m., during 4 weeks. Control group received vehicle only. We performed qPCR and immunoblot analyses for gene and protein expressions, respectively. Obtained results showed that NAR treatment lowered ( $P < 0.05$ ) mRNA levels of Nrf2, superoxide dismutase 1 and 2 (Sod1, Sod2) and catalase (Cat) for 42%, 32%, 45% and 35%, respectively, while it only increased ( $P < 0.05$ ) expression of glutathione peroxidase (Gpx) for 54%, all in comparison with the controls. Gene expression of glutathione reductase (Gr) remained unchanged. Also, NAR up-regulated ( $P < 0.05$ ) protein expression of NRF2 and SOD2 for 58% and 50%, respectively, and down-regulated ( $P < 0.05$ ) SOD1 expression for 48%, all when compared to the adequate control values. CAT, GR and GPx protein expressions didn't change after NAR treatment. It can be concluded that NAR changes gene and protein expression of NRF2 in old-aged rat model. Down-regulation in Nrf2 gene expression, and some AOE, is in line with previously observed TSH stimulation after NAR. Antioxidant protection in thyroid needs to be lowered in order to ensure sufficient ROS for adequate thyroid hormones production. However, due to NAR prooxidant properties, redox status in thyroid upon its application was changed, inducing accumulation of NRF2 protein in the thyrocytes. This led to increment of Gpx gene and SOD2 protein expression, helping in maintenance of fundamental antioxidant protection and disposal of excessive ROS in the thyroid gland of old-aged rats.

DOI: 10.1530/endoabs.70.AEP919

### AEP920

#### Retrospective analysis of low risk thyroid cancers. Total thyroidectomy or lobectomy is the optimal approach for follow up?

Zoltán Hella<sup>1</sup>, László Vass<sup>2</sup>, Zsolt Csapó<sup>3</sup> & Gábor László Kovács<sup>1</sup>

<sup>1</sup>Flor Ferenc Hospital, 1st Department of Internal Medicine, Kistarcsa, Hungary; <sup>2</sup>Flor Ferenc Hospital, Department of Pathology, Kistarcsa, Hungary; <sup>3</sup>Flor Ferenc Hospital, Department of Surgery, Kistarcsa, Hungary

#### Background

Differentiated thyroid cancer (DTC)  $< 1$  cm without risk factors require only lobectomy, and there is no need for radioiodine remnant ablation (RRA). The approach for surgery and RRA after surgery is less clearly defined for tumours measuring 1–4 cm.

#### Objectives

We aimed to evaluate the surgical approaches of DTC in stages pT1–2 in a moderate iodine deficient area. We compared our data to the current European Thyroid Association (ETA, 2006) and American Thyroid Association (ATA, 2015) clinical practice guidelines.

#### Methods

Data of 111 DTC patients treated between 2013–2018 at Flor Ferenc Hospital, Kistarcsa were retrospectively analyzed. The therapeutical response could be evaluated in 96 DTC patients.

#### Results

81 patients were classified with DTC in stages pT1–2. 64 patients were found in stages pT1, 17 patients were detected in stages pT2. The histological distribution of DTC was 65/81 (80.2%) papillary thyroid cancer (PTC) and 16/81 (19.8%) follicular thyroid cancer (FTC). Lymph node metastases were present in 21.5% of PTC and 0% of FTC. No distant metastases were detected. 25% of pT1 DTC was multifocal (9% limited to one lobe, 16% involved both lobes/isthmus), and 11.7% of pT2 DTC was multifocal (5.8% limited to one lobe, 5.8% involved both lobes). Thus pT1–2 multifocal DTC located in both lobes/isthmus were found in 11 patients (13.5%), all PTC, whereby 4/37 (10.8%) were in stage pT1a, 5/27 (18.5%) were in stage pT1b, 2/17 (11.8%) were in stage pT2. All of them underwent total thyroidectomy, and in 10 of 11 were done postsurgical RRA. The tumour size in the contralateral lobe was  $< 5$  mm in 5 cases, was  $> 5$  mm in 3 cases (mean 9.6 mm) and there were no exact data in 3 cases.

#### Conclusions

In 13.5% of pT1–2 patients (11/81) the tumour involved both lobes, which changes the staging of the disease. The size of the tumour in the contralateral lobe is small in most cases (mean 1.4 mm), this fact makes almost impossible to detect and follow up them by ultrasound. Therefore we suggest total thyroidectomy in moderate or low iodine supplied areas in T1b–T2 cases to improve the risk stratification, to determine the necessity of RRA and the long-term follow up, which are almost impossible if only lobectomy is being done.

DOI: 10.1530/endoabs.70.AEP920

### AEP921

#### Early diagnosis of medullary thyroid cancer in case of low serum calcitonin: Role of calcitonin measurement in fine-needle aspiration washout fluid

Carla Greco<sup>1</sup>, Bruno Madeo<sup>1</sup>, Vincenzo Rochira<sup>1</sup>, Maria Cristina De Santis<sup>2</sup> & Giulia Brigante<sup>1</sup>

<sup>1</sup>University of Modena and Reggio Emilia, Unit of Endocrinology, Department Biomedical, Metabolic and Neural Sciences., Modena, Italy; <sup>2</sup>Department of Clinical Pathology, University Hospital of Modena, Department of Clinical Pathology, Modena, Italy

#### Background

Screening serum calcitonin (sCT) measurement in patients with thyroid nodules is still debated. Moreover, sCT cutoffs for medullary thyroid carcinoma (MTC) are not univocally defined. Also, sensitivity of cytology by fine needle aspiration biopsy (FNAb) has been demonstrated to detect approximately half of MTCs. Ct measurement in fine-needle aspiration washout fluid (Ct-FNAb) has high sensitivity and specificity and is helpful in case of non-diagnostic cytology<sup>1</sup>. Recently, a series of low sCT MTC has been collected<sup>2</sup>.

#### Aim

The objectives of this retrospective observational study were to define Ct-FNAb levels in subjects with low sCT (below cutoffs diagnostic for MTC) and to evaluate their clinical, ultrasonographic (US), cytological and histological characteristics.