Research: Treatment

Baseline characteristics in the VERIFY study: a randomized trial assessing the durability of glycaemic control with early vildagliptin-metformin combination in newly diagnosed Type 2 diabetes

D. R. Matthews¹,², P. M. Paldánius³, P. Proot³, J. E. Foley⁴, M. Stumvoll⁵ and S. Del Prato⁶

¹Oxford Centre for Diabetes Endocrinology and Metabolism, ²Harris Manchester College, Oxford, UK, ³Novartis Pharma AG, Basel, Switzerland, ⁴Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA, ⁵Divisions of Endocrinology and Diabetes, University Hospital Leipzig, Germany and ⁶Department of Clinical and Experimental Medicine, Section of Metabolic Diseases and Diabetes, University of Pisa, Pisa, Italy

Accepted 18 December 2018

Abstract

Aim To assess the long-term clinical benefits of early combination treatment with vildagliptin-metformin vs. standard-of-care, metformin monotherapy in the ongoing VERIFY study.

Methods We randomized 2001 participants with multi-ethnic background, aged 18–70 years, having HbA1c levels 48–58 mmol/mol (6.5–7.5%) and BMI 22–40 kg/m². Baseline data included HbA1c, fasting plasma glucose and homeostasis model β-cell and insulin sensitivity. Standardized meal-tests, insulin secretion rate relative to glucose, and oral glucose insulin sensitivity were assessed in a subpopulation.

Results Out of 4524 screened, data were collected from the 2001 eligible participants (53% women) across Europe (52.4%), Latin America (26.8%), Asia (17.2%), South Africa (3.1%) and Australia (0.5%). The median (interquartile range) disease duration was 3.4 (0.9, 10.2) months; mean (±SD) age 54.3±9.4 years; weight 85.5±17.5 kg and BMI 31.1±4.7 kg/m². Baseline HbA1c was 52±3 mmol/mol (6.9±0.3%), fasting plasma glucose 7.5±1.5 mmol/l and the median (interquartile range) of fasting insulin was 109 (75–160) mU/l. Homeostasis model β-cell and insulin sensitivity values were 84% (60, 116) and 46% (31, 68), respectively. In those undertaking meal-tests, insulin secretion rate relative to glucose was 28±12 pmol/min/m²/mmol/l and oral glucose insulin sensitivity was 353±57 ml/min/m².

Conclusions Our current, multi-ethnic, newly diagnosed VERIFY population reflects a characteristic presence of early insulin resistance in participants with increased demand for insulin associated with obesity. The VERIFY study will provide unique evidence in characterizing therapeutic intervention in a diverse population with hyperglycaemia, focusing on durability of early glycaemic control.

Diabet. Med. 36: 505–513 (2019)

Introduction

There is debate about the optimum early pharmacological treatment of diabetes, although most authorities recommend metformin [1]. Beyond metformin it is usual to add a second therapy, but often this intensification occurs late, long after good glycaemic control is lost [2]. Second line agents include dipeptidyl peptidase-4 (DPP-4) inhibitors, which are good candidates for early combination therapy [1]. DPP-4 inhibitors improve glucose homeostasis synergistically with metformin even in mild hyperglycaemia, without the adverse effects of weight gain and hypoglycaemia [3,4].

VERIFY (Vildagliptin Efficacy in combination with metfoRmIn For earlY treatment of Type 2 diabetes) is an ongoing, 5-year, multinational, multi-ethnic study being conducted in 254 centres across 34 countries (Appendix: Table A1). We aimed to investigate, for the first time, the long-term benefits of early treatment intensification with a DPP-4 inhibitor (vildagliptin)-metformin combination over...
What’s new?

- The VERIFY study is the first study to assess the long-term clinical benefits of early combination treatment with a dipeptidyl peptidase-4 inhibitor (vildagliptin)-metformin vs. standard-of-care metformin monotherapy in people newly diagnosed with Type 2 diabetes.
- This report describes the baseline characteristics of a newly diagnosed population with Type 2 diabetes from a diverse geographical and ethnic background, demonstrating a classic profile of presence of early insulin resistance associated with elevated BMI as a surrogate for obesity.
- The study anticipates generating unique evidence on the progression of β-cell function, insulin resistance, early complications of diabetes, and effect on health status upon treatment with early vildagliptin-metformin combination.

In contrast to many cardiovascular outcome studies, we aimed to recruit a population reflecting the typical characteristics of newly diagnosed people living with diabetes worldwide.

Methods

Study design

The study design has been described in detail elsewhere [5]. Briefly, the VERIFY trial (NCT01528254) is an ongoing randomized, double-blind, parallel-group study consisting of a screening visit, a 3-week metformin-alone run-in period, and a 5-year treatment period during which the treatment is consecutively intensified, when clinically indicated at the investigators’ discretion. Durability of glycaemic control, time to insulin initiation, changes in β-cell function and insulin resistance have been assessed over time.

The study protocol was approved by the Institutional Review Boards, Independent Ethics Committees and Competent Health Authorities in accordance with European Community Directive 2001/20/EC or as per national and international regulatory requirements in participating countries.

Study population

Participants aged 18–70 years, newly diagnosed with Type 2 diabetes (≤24 months) as per local diagnostic criteria, having centrally confirmed HbA1c levels between 48 mmol/mol (6.5%) and 58 mmol/mol (7.5%), and BMI 22–40 kg/m², were included in the study [5]. Individuals undergoing anti-diabetes treatment (except for short-term metformin) within 3 months prior to screening, or using any weight-loss medications were excluded, as were pregnant or breastfeeding women, and those with chronic liver disease or ongoing congestive heart failure [New York Heart Association (NYHA) III or IV].

Study assessments

Baseline measurements were obtained at the screening visit, or at the next visit prior to initiation of metformin up-titration. The primary efficacy assessments include HbA1c measurements to determine the time to initial treatment failure and the rate of loss in glycaemic control over time. Participants visit the study site every 13 weeks for 5 years to comply with the study procedures [5]. Laboratory samples are collected at each visit and analysed. Vital signs, electrocardiogram, body weight, haematology and biochemistry, fasting lipid profile and triglycerides, liver and renal function tests, urinalysis and adverse events are the key safety assessments. Major adverse cardiovascular events are independently adjudicated (exploratory endpoint) and an independent data safety committee monitors an unblinded periodic review of all safety data.

In a large subpopulation (n=462), standardized and locally adapted, annual meal-tests are performed for assessment of plasma glucose levels, insulin, and C-peptide concentrations. Indices of β-cell function (insulin secretion rate relative to glucose and homeostasis model assessment of β-cell function (HOMA-β)), insulin sensitivity (oral glucose sensitivity index), and insulin resistance (HOMA-% sensitivity) are calculated [6,7].

Statistical analysis

Blinded baseline demographics and key glycaemic variables were analysed descriptively and summarized for all randomized participants. Categorical variables including age, gender and BMI were summarized with frequency and percentage, whereas continuous variables including duration of disease and HbA1c were summarized with mean ±SD.

Results

Recruitment of participants

Recruitment for the VERIFY trial started in March 2012 and randomization was completed in April 2014. A total of 2001 people, newly diagnosed with mild hyperglycaemia, were randomized out of the 4524 screened. The major reason for screening failure was an HbA1c value outside the protocol-defined, centrally assessed range of 48–58 mmol/mol (6.5–7.5%). A total of 66 participants were classified as run-in failures because of metformin-intolerance prior to up-titration to the lowest targeted dose of 1000 mg/day. Details of participants’ dispositions are shown in Figure 1.
The geographical distribution of participants enrolled for this trial was: Europe (52.4%), Latin America (26.8%), Asia (17.2%), South Africa (3.1%) and Australia (0.5%).

Baseline characteristics

Overall demographics and baseline characteristics of participants are presented in Table 1.

The median (interquartile range) age of participants was 55 (48, 62) years, baseline HbA1c 52/63 mmol/mol (corresponding to 6.9/6.0%), fasting plasma glucose 7.5/1.5 mmol/l, and median (interquartile range) duration of diabetes 3.4 (0.9,10.2) months. Overall, men and women were often enrolled equally in the study despite some country-level differences. The mean baseline GFR was 87.4/18.5 ml/min/1.73m². Overall, 14.5% of the study population were smoking at baseline. Presence of early microvascular complications were reported in 8% of the participants enrolled.

At baseline the median (interquartile range) of fasting insulin was 109 (75–160) mU/l, and HOMA-ß and HOMA-% sensitivity values were 84% (60, 116) and 46% (31, 68), respectively. In the subset of participants (n=462) undertaking meal-tests, 2-hour plasma glucose values were 9.3/2.8 mmol/l, insulin secretion rate relative to glucose was 28±12 pmol/min/m²/mmol/l, and oral glucose sensitivity index value was 353±57 ml/min/m². Table 2 shows the variability of the meal-test measurements by geographic distribution.

Discussion

The VERIFY study cohort explores a newly diagnosed population with Type 2 diabetes with mild hyperglycaemia who have the potential for preservation of their β-cell function, and for achieving a long-term durable response to early therapy.

One principal goal of treating newly diagnosed drug-naive individuals is to achieve glycaemic control approaching normoglycaemia [8]. This trial explores the concept that optimization of therapy, in this case with an early vildagliptin-metformin combination, could overcome β-cell functional deterioration and thereby extend the durability of treatment over time.

Previous intervention studies on initial combination therapy have recruited participants with baseline HbA1c levels ≥64 mmol/mol (≥8.0%) [9–15]. Additionally, A Diabetes Outcome Progression Trial (ADOPT) [16] and Diabetes Prevention Program (DPP) [17] reported limited baseline variables with
Diabetic Medicine published by John Wiley & Sons Ltd on behalf of Diabetes UK

DIABETIC Medicine

VERIFY trial: baseline characteristics • D. R. Matthews et al.

Diabetic Medicine published by John Wiley & Sons Ltd on behalf of Diabetes UK

Table 1 Demographics and baseline characteristics of participants

| Variable | Total |
|----------|-------|
| Patient population, n | 2001 |
| Women, n (%) | 1060 (53.0) |
| Age, years | 56±3 |
| Median (IQR) | 55 (48, 62) |
| Race, n (%) | 1217 (60.8) |
| White European | 49 (2.4) |
| Black | 373 (18.6) |
| Asian | 210 (10.5) |
| Native American | 152 (7.6) |
| Other | 84 (40, 116) |
| HOMA-%* sensitivity, median (IQR) (%) | 46 (31, 68) |
| BMI, kg/m² | 31.1±4.7 |
| Pulse rate, bpm | 72.8±9.3 |
| Systolic BP, mmHg | 132.3±14.4 |
| Diastolic BP, mmHg | 80.6±8.6 |
| HDL cholesterol, mmol/l | 2.9±0.9 |
| Triglycerides, mmol/l | 1.9±1.0 |
| UALCRR, mg/mmol | 1.0 (0.1–262.3) |
| GFR (MDRD), mL/min/1.73m² | 78.4±18.5 |
| History of diabetes and complications*, n (%) | 1.0 (0.0) |
| Proliferative retinopathy | 11 (0.5) |
| Non-proliferative retinopathy | 26 (1.3) |
| Nephropathy | 116 (5.8) |
| Neuropathy | 5 (0.2) |
| Foot ulcers | 1597.3±396.5 |
| Most common metformin dose, mg | 796 (39.8) |
| Data obtained from meal-test substudy are reflective of regional variations observed in plasma glucose, C-peptide, and insulin concentrations, which may prove important in the subgroup analysis of β-cell failure. Previously published data [18,19] demonstrated variations in postprandial glucose response, fasting insulin, and C-peptide concentrations between various ethnic groups. Such regional differences in the inter-relationships of early signs of increased insulin resistance (reduced sensitivity) and reduced β-cell function would be important to both document and interpret for optimized clinical decision making.

Long-term clinical trials normally pose a big challenge with low patient recruitment. Evaluating the durability of treatment prospectively necessitates retention throughout the duration of the study. The VERIFY trial has an active retention programme, tailored to the needs of individuals, but over time the study is also carrying out innovative, relational real-time data monitoring to improve the retention rates. The presence of baseline microvascular complications, including proliferative and non-proliferative retinopathy, nephropathy, neuropathy, and foot ulcer conditions, demonstrates the asymptomatic nature of Type 2 diabetes and early onset of foundation for its complications, emphasizing the importance of early treatment interventions to prevent or slow down the disease progression prior to advent of further diabetic complications. The major strength of the VERIFY trial is the selection of a geographically distributed diverse, multi-ethnic population and long-term duration of 5 years for all the participants, ensuring the generalizability of the trial results and providing guidance in clinical decision making for the increasing number of people with newly diagnosed Type 2 diabetes. The enrolled participants display a classic profile of presence of early insulin resistance associated with elevated BMI as a surrogate for obesity. The study anticipates the generation of unique evidence for many geographical areas with limited or no prior epidemiological or other data on β-cell function, insulin resistance, early complications of diabetes, and effect on health status upon treatment with a DPP-4 inhibitor-metformin combination. The study is currently underway and will report in 2019.

Diabetes Medicine published by John Wiley & Sons Ltd on behalf of Diabetes UK

Table 2 2-hour meal-test data by variables and geographical distribution

| Variable | Europe | Latin America | Asia* | South Africa |
|----------|--------|---------------|-------|--------------|
| Distribution, n (%) | 267 (57.8) | 152 (32.9) | 32 (6.9) | 11 (2.4) |
| Plasma glucose (mmol/l) Median (Min–Max) | 9.3 (4.0–16.5) | 7.9 (4.2–24.0) | 10.4 (6.4–15.1) | 9.8 (5.6–17.1) |
| Insulin (pmol/l) Median (Min–Max) | 58.9 (3.5–286.6) | 55.7 (7.6–404.5) | 97.8 (20.7–435.6) | – |
| C-peptide (nmol/l) Median (Min–Max) | 1.9 (0.4–5.7) | 1.8 (0.3–4.8) | 2.1 (0.5–5.0) | – |

*values for Asia exclude India.
Funding sources
This work was supported by Novartis Pharma AG.

Competing interests
D.R.M. has served on advisory boards or as a consultant for Novo Nordisk, GlaxoSmithKline, Novartis, Eli Lilly, Sanofi-Aventis, Janssen, and Servier; receives current research support from Jannsen; and has given lectures for Novo Nordisk, Servier, Sanofi-Aventis, Eli Lilly, Novartis, Janssen and Aché Laboratories. P.M.P. and P.P. are employed by and own stocks in Novartis. J.E.F. was an employee of Novartis. S.D.P. serves or has served on advisory boards for AstraZeneca, Boehringer Ingelheim, Eli Lilly and Company, Boehringer Ingelheim. S.D.P. serves or has served on advisory boards for Janssen, Boehringer Ingelheim, Eli Lilly and Company, GlaxoSmithKline, Hanmi Pharmaceuticals, Intarcia, Janssen Pharmaceuticals, Merck Sharp & Dohme Ltd, Novartis, Novo Nordisk, Sanofi, Servier and Takeda; serves or has served on the speakers’ bureau for AstraZeneca, Boehringer Ingelheim, Eli Lilly and Company, Janssen Pharmaceuticals, Merck Sharp & Dohme Ltd, Novartis, Novo Nordisk, Sanofi and Takeda; and has received research support from Boehringer Ingelheim, Merck Sharp & Dohme Ltd and Novartis.

Acknowledgements
The authors would like to thank Dr. Wolfgang Kothny, Novartis Pharma AG, Basel, Switzerland for his contribution and scientific advice during the study design and initiation phase. The authors would also like to thank Rangan Gupta and Amit Kumar Garg for editorial assistance, collation, and incorporation of comments from all authors, conducted in accordance with Good Publication Practice guidelines (http://www.ismpp.org/gpp3).

References
1 Zinman B. Initial combination therapy for type 2 diabetes mellitus: is it ready for prime time? Am J Med 2011; 124: S19–S34.
2 Khunti K, Wolden ML, Thorsted BL, Andersen M, Davies MJ. Clinical inertia in people with type 2 diabetes: A retrospective cohort study of more than 80,000 people. Diabetes Care 2013; 36: 3411–3417.
3 Matthews DR, Jeager S, Ahren B, Fonseca V, Ferrannini E, Couturier A et al. Vildagliptin add-on to metformin produces similar efficacy and reduced hypoglycaemic risk compared with glimepiride, with no weight gain: results from a 2-year study. Diabetes Obes Metab 2010; 12: 780–789.
4 Boss E, Dotta F, Jia Y, Goodman M. Vildagliptin plus metformin combination therapy provides superior glycaemic control to individual monotherapy in treatment-naive patients with type 2 diabetes mellitus. Diabetes Obes Metab 2009; 11: 506–515.
5 Del Prato S, Foley JE, Kothny W, Kozlovska P, Stumvoll M, Paldaius PM et al. Study to determine the durability of glycaemic control with early treatment with a vildagliptin/metformin combination regimen vs. standard-of-care metformin monotherapy—the VERIFY trial: a randomized double-blind trial. Diabet Med 2014; 31: 1178–1184.
6 Pratley RE, Schweizer A, Rosenstock J, Foley JE, Banerji MA, Pi-Sunyer FX et al. Robust improvements in fasting and prandial measures of beta-cell function with vildagliptin in drug-naive patients: analysis of pooled vildagliptin monotherapy database. Diabetes Obes Metab 2008; 10: 931–938.
7 Hill NR, Levy JC, Matthews DR. Expansion of the homeostasis model assessment of beta-cell function and insulin resistance to enable clinical trial outcome modeling through the interactive adjustment of physiology and treatment effects: iHOMA2. Diabetes Care 2013; 36: 2324–2330.
8 Garber AJ, Abrahamsson MJ, Barzilay JI, Blonde L, Bloomgarden ZT, Bush MA et al. Consensus statement by the American Association of Clinical Endocrinologists and American College of Endocrinology on the comprehensive type 2 diabetes management algorithm - 2017 executive summary. Endocr Pract 2017; 23: 207–238.
9 Abdul-Ghani MA, Packett C, Triplitt C, Maggs D, Adams J, Cersosimo E et al. Initial combination therapy with metformin, pioglitazone and exenatide is more effective than sequential add-on therapy in subjects with new-onset diabetes. Results from the Efficacy and Durability of Initial Combination Therapy for Type 2 Diabetes (EDICT): a randomized trial. Diabetes Obes Metab 2015; 17: 269–275.
10 Pratley RE, Flook P, Wilson C. Efficacy and safety of initial combination therapy with alogliptin plus metformin versus either monotherapy in drug-naive patients with type 2 diabetes: a randomized, double-blind, 6-month study. Diabetes Obes Metab 2014; 16: 613–621.
11 Phung OJ, Sobieraj DM, Engel SS, Rajpathak SN. Early combination therapy for the treatment of type 2 diabetes mellitus: systematic review and meta-analysis. Diabetes Obes Metab 2014; 16: 410–417.
12 Haak T, Meinicke T, Jones R, Weber S, von Eynatten M, Woerle HJ. Initial combination of linagliptin and metformin in patients with type 2 diabetes: efficacy and safety in a randomized, double-blind 1-year extension study. Int J Clin Pract 2013; 67: 1283–1293.
13 Williams-Herman D, Xu L, Teng R, Golm GT, Johnson J, Davies MJ et al. Effect of initial combination therapy with sitagliptin and metformin on β-cell function in patients with type 2 diabetes. Diabetes Obes Metab 2012; 14: 67–76.
14 Reasner C, Olansky L, Seck TL, Williams-Herman DE, Chen M, Terranella L et al. The effect of initial therapy with the fixed-dose combination of sitagliptin and metformin compared with metformin monotherapy in patients with type 2 diabetes mellitus. Diabetes Obes Metab 2011; 13: 644–652.
15 Mirasol RC, Pathan MF, Chawla M, Kim TH, Cooke K, Hours-Zesiger P et al. INITIAL combination therapy with vildagliptin/metformin in drug-naive Asian T2DM patients: influence of age, BMI and co-morbidities in a real-world setting. PO-774. Poster presented at the 53rd European Association for the Study of Diabetes Annual Meeting, 11–15 September 2017, Lisbon, Portugal.
16 Viberti G, Kahn Se, Greene DA, Herman WH, Zinman B, Holman RR et al. A diabetes outcome progression trial (ADOPT): an international multicenter study of the comparative efficacy of rosiglitazone, glyburide, and metformin in recently diagnosed type 2 diabetes. Diabetes Care 2002; 25: 1737–1743.
17 Diabetes Prevention Program (DPP) Research Group. Hypertension, insulin, and proinsulin in participants with impaired glucose tolerance. Hypertension 2002; 40: 679–686.
18 Tan VM, Lee YS, Venkataraman K, Khoo EY, Tai ES, Chong YS et al. Ethnic differences in insulin sensitivity and beta-cell function among Asian men. Nutr Diabetes 2015; 5: e173.
19 Harris MI, Cowie CC, Gu K, Francis MF, Flegal K, Eberhardt MS. Higher fasting insulin but lower fasting C-peptide levels in African Americans in the US population. Diabetes Metab Res Rev 2002; 18: 149–155.
## Appendix

### Table A1 Trial investigators and sites

| Site number | Principal investigator | Institution |
|-------------|------------------------|-------------|
| 1           | Silvia Gorban de Lapertosa | Centro Universitario de Investigaciones en Farmacología Clínica, Corrientes, Argentina |
| 2           | Diego Azememberg        | Centro Medico Viamonte, Buenos Aires, Argentina |
| 3           | Ines Bartolacchi        | Instituto Privado De Investigaciones Clinicas De Cordoba, Cordoba, Argentina |
| 4           | Silvia Oriio            | IMOB, CABA, Capital Federal, Argentina |
| 5           | Federico Perez Manghi   | CINME, CABA, Buenos Aires, Argentina |
| 6           | Laura Maffei            | Consultorios Medicos (Investigacion Clinica Aplicada SRL), CABA, Buenos Aires, Argentina |
| 7           | Jorge Aihui             | Grupo Medico Alem, San Isidro, Buenos Aires, Argentina |
| 8           | Paula Kavaliros         | Woy Woy General Practice, Woy Woy, NSW, Australia |
| 9           | Hans Blom               | Vale Medical Practice, Brookvale, NSW, Australia |
| 10          | Adrian Kenny            | Morayfield Medical Centre, Morayfield, QLD, Australia |
| 11          | Rudolf Prager           | Krankenhaus der Stadt Wien Hietzing-Lainz, Wien, Austria |
| 12          | Alexandra Kautzky-Willer | Univ. Klinik fuer Innere Medizin III, AKH Wien, Wien, Austria |
| 13          | Maria Zanella           | Universidade Federal de Sao Paulo, Sao Paulo, SP, Brazil |
| 14          | Carolina Chrisman       | Núcleo de Medicina Integrada, Mogi das Cruzes, Brazil |
| 15          | Joao Salles             | Hospital Universitário João de Barros Barreto, Belem, PA, Brazil |
| 16          | Jorge Gross             | Centro de Pesquisas em Diabetes, Porto Alegre, RS, Brazil |
| 17          | Joao Borges             | Centro de Pesquisa Clinica do Brasil, Brasilia, DF, Brazil |
| 18          | Maria Jose Cerqueira    | Instituto de Ensino e Pesquisa Clinica do Ceará, Fortaleza, CE, Brazil |
| 19          | Miguel Nasser Hissa     | Centro de Pesquisas em Diabetes e Doenças Endócrino-Metabólicas, Fortaleza, CE, Brazil |
| 20          | Sergio Cunha Vencio     | Hospital Nossa Senhora das Graças, Curitiba, PR, Brazil |
| 21          | Edgard Niclewicz        | Hospital das Clinicas da Faculdade de Medicina da USP, Sao Paulo, SP, Brazil |
| 22          | Joao Salles             | USHATE"Akad. Ivan Penchev", Sofia, Bulgaria |
| 23          | Galina Dakowska         | MMA-MHAT- Sofia, Sofia, Bulgaria |
| 24          | Ivona Daskalova         | UMHAT Alexandrovska, Sofia, Bulgaria |
| 25          | Zdravko Kamenov         | UMHAT Kasplat, Plovdiv, Bulgaria |
| 26          | Stefan Vladeva          | Umhut "Iskra", Plovdiv, Bulgaria |
| 27          | Nataliya Temelkova      | Alexandria University Hospital, Dermatology & Venerology, Sofia, Bulgaria |
| 28          | Natalia Veleva          | DCC XII, Sofia, Bulgaria |
| 29          | Maria Lucheva           | MHAT Dr Hristo Stambolski EOOD, Kazanlak, Bulgaria |
| 30          | Emilia Apostolova       | MHAT Bratan Shukorov, Smoljan, Bulgaria |
| 31          | Dotska Minkova          | MHAT Razgrad, Razgrad, Bulgaria |
| 32          | Rozska Shumkova         | MHAT Dr. Tota Venkova AD, Cardiology Department, Gabrovo, Bulgaria |
| 33          | Tsvetodara Kuneva       | DCC 1 Rus EOOD, Ruse, Bulgaria |
| 34          | Jaime Ibarra            | Centro de Diabetes Cardiovascular del Caribe, Barranquilla, Colombia |
| 35          | Hernan Yupanqui         | DEXADIAP, Bogotá, Colombia |
| 36          | Arturo Orduz           | Fundacion Hospital Infantil Universitario de San Jose, Bogota, Cundinamarca, Colombia |
| 37          | Fernando Manzur         | Centro de Diagnostico Cardiologico, Cartagena, Bolivar, Colombia |
| 38          | Jose Luis Accini Mendoza| IPS Centro Cientifico Asistencial, Barranquilla, Colombia |
| 39          | Jan Gerle              | Medica JM S.R.O., Praha, Czech Republic |
| 40          | Tomas Spousta          | Diabetologicka ambulancie Ostrava, Ostrava, Czech Republic |
| 41          | Jan Vorisek            | Diabetologicka ambulancie MUDr. Jan Vrkoec S.R.O., Moravská Ostrava, Czech Republic |
| 42          | Sarka Kopecka          | DIACENTRUM Brandys n.L. s.r.o, Brandys Nad Labem, Brandys Nad Labem |
| 43          | Katarina Halciakova     | Diabetologicka ambulancie, Prague 5, Czech Republic |
| 44          | Miloslova Komrskova     | Diabetologicka, interni ambulancie, Pisek, Czech Republic |
| 45          | Casimiro Velacio       | Instituto de Endocrinologia, Nutricion y Osteoporosis, Santo Domingo, Republica Dominicana |
| 46          | Dolores Mejia          | Hospital General Plaza de la Salud, Santo Domingo, Republica Dominicana |
| 47          | Juan Vargas            | Hospiten Santo Domingo, Santo Domingo, Republica Dominicana |
| 48          | Svea Rosenthal         | Rosenthal Family Doctors Centre, Tallinn, Estonia |
| 49          | Mirjam Turkson         | Pirita Family Doctor's Centre, Tallinn, Estonia |
| 50          | Kristi Outsmeeh        | OÜ Kodudoktori PAK Sinu Arst, Tallinn, Estonia |
| 51          | Kaija Martins          | Musmame Health Centre, Tallinn, Estonia |
| 52          | Mai Stern              | Saku Health Care Center, Saku, Estonia |
| 53          | Jurin Linros          | Keravan terveyskeskus, Kerava, Finland |
| 54          | Karita Sadeharju      | Seinajoen Seudun Terveyskeskus, Seinajoki, Finland |
| 55          | Jyri Makela            | Mehilainen Lahti, Lahti, Finland |
| 56          | Paivi Matsu           | Kouvolan terveyskeskus, Kouvolu, Finland |
| 57          | Anneli Hamavaara       | Terveystalo Tampere, Tampere, Finland |
| 58          | Susanna Pihlman        | Pohjois-Karjala projektis-aat, Joensuu, Finland |
| 59          | Matti Kuusela         | Kokkolan Laakaireskeskus, Kokkola, Finland |
| 60          | Sirkka Keinanen-Kiukaanniemi | Oulun Diankonissalaitos, Oulu, Finland |
| 61          | Zdenek Behnke         | Zentrum für Klinische Forschung Neuried (ZKSN), Neuried, Germany |
### Table A1 (Continued)

| Site number | Principal investigator | Institution |
|-------------|------------------------|-------------|
| 64          | Michael Eggeling       | Aerechtenshaus Schulstr. 165 Dres. Eggeling, Koch, Wollny, Kamp-Lintfort, Germany |
| 65          | Stefan Goedz           | Praxis Dr. Goedz, Esslingen am Neckar, Germany |
| 66          | Hans-Peter Kempe        | Gemeinschaftspraxis Dres. Stemler u. Kempe, Ludwigshafen, Germany |
| 67          | Gerhard Klausmann      | Gemeinschaftspraxis Dr. Klausmann/Dr. Weblau, Aschaffenburg, Germany |
| 68          | Uwe Kleinecke-Pohl      | Praxis Dr. Kleinecke-Pohl / Zentrum für Klinische Forschung, Koln, Germany |
| 69          | Michael Morcos         | Stoffwechselzentrum Rhein-Pfalz, Mannheim, Germany |
| 70          | Thorsten Rau           | Praxis Dr. Rau, Essen, Germany |
| 71          | Joachim Sauter         | Praxis Dr. Sauter, Wangen, Germany |
| 72          | Alexander Segner       | Praxis Dr. Segner, St. Ingbert – Oberwuerzbach, Germany |
| 73          | Joerg Simon            | Praxis Dr. med. Joerg Simon, Fulda, Germany |
| 74          | Marc Haefner           | Praxis Dr. Haefner / Stemmaer, Viernheim, Germany |
| 75          | Dietrich Tews          | Diabetestzenrum Dr. Tews, Gelnhausen, Germany |
| 76          | Martin Grundner        | Praxis Dr. Grundner / Dr. Hintze, Hainstadt, Hainburg, Germany |
| 77          | Michael Roden          | Deutsches Diabetes Zentrum / Heinrich-Heine-Universitaet, Duesseldorf, Germany |
| 78          | Tobias Ohde            | Ambulantes Diabeteszentrum Essen Nord, Essen, Germany |
| 79          | Markolf Hanefeld       | GWT-TUD mbH, Studienzentrum Prof. Hanefeld, Dresden, Germany |
| 80          | Sergio Bran            | Clinica Dr. Sergio Bran, Guatemala City, Guatemala, Mexico |
| 81          | Clara Chang            | Clinica Dra Clara Chang, Guatemala City, Mexico |
| 82          | Lorena Garcia          | Centro Clinico Reumatologico, Guatemala City, Guatemala, Mexico |
| 83          | Luis Ramirez           | Clinica Dr. Luis Ramirez 2, Guatemala City, Guatemala, Mexico |
| 84          | Narda Guerrero         | Centro de Investigacion Clinica, Guatemala City, Guatemala, Mexico |
| 85          | Juan Moreira           | Centro de Investigacion Dr. Moreira clinica, Mexico |
| 86          | Flor Ranchos           | Centro de Investigacion Dra. Flor de Maria Ranchos, Guatemala City, Guatemala, Mexico |
| 87          | Rosa Oraki             | Medicine & Therapeutics,The Chinese University of Hong Kong, Hong Kong |
| 88          | Chiu-Chi Tsang         | Alice Ho Mui Ling Netherole Hospital, Hong Kong |
| 89          | Michelle Wong          | Shau Kei Wan Jockey Club GOPC, Hong Kong |
| 90          | Robert Takacs          | Szent Gyorgyi Albert Klinikai Kozpont, Szeged, Hungary |
| 91          | Albert Szocs           | Szocs Depot Eu Szolg Kft, Budapest, Hungary |
| 92          | Janos Penzes           | Haziorvosi Rendelo Csongrad, Csongrad, Hungary |
| 93          | Lazlo Futo             | Markhot Ferenc Korhaz, Eger, Hungary |
| 94          | Zsuzsanna Kerenyi       | Toth Ilona Eu Szolgaltat, Budapest, Hungary |
| 95          | Tamas Oroszljan        | Zala Megyei Korhaz, Zalaegerszeg, Hungary |
| 96          | Margit Mileder         | Veszprem Megyei Csomknoky Ferenc Korhaz Nonprofit Zrt., Veszprem, Hungary |
| 97          | Gizella Pap            | Kalocsi Szent Kereszt Korhaz, Kalocsa, Hungary |
| 98          | Kasthuri Alagasinghachar Srinivasan | Bangalore Diabetes Centre, Bangalore, Karnataka, India |
| 99          | Mala Dharmaalingam     | Bangalore Endocrinology Diabetes Research Center, Bangalore, Karnataka, India |
| 100         | Sudhir Bhandari        | Bhandari Clinic & Research Center, Jaipur, Rajasthan, India |
| 101         | Uday Phadke            | Hormones and Diabetes Care Clinic, Pune, Maharashtra, India |
| 102         | Rakesh Kumar Maliram Parikh | Diamed Clinical Research Services Pvt. Limited, Jaipur, Rajasthan, India |
| 103         | A. Ramachandran        | Dr.A.Ramachandran’s Diabetes Hospital, Chennai, Tamil Nadu, India |
| 104         | Anil Bhansali          | Post Graduate Institute of Medical Education & Research, Chandigarh, India |
| 105         | C. S. Jajnik           | KEM Hospital, Pune, Maharashtra, India |
| 106         | Vishwanathan Mohan     | Dr. V. Mohan’s Diabetes Specialities Centre, Chennai, Tamil Nadu, India |
| 107         | Arun Chankramath Somasekharan | Amritha Institute of Medical Sciences (AIMS), Kochi, Kerala, India |
| 108         | Satish Agarwal         | Indraprashta Apollo Hospital, New Delhi, India |
| 109         | Ganapathi Bhatwali     | St. John’s National Academy of Health Sciences, Bangalore, Karnataka, India |
| 110         | Sunil M Jain           | TOTTALL Diabetes Hormone Institute, Indore, Madhya Pradesh, India |
| 111         | Julio Wainstein        | The E Wolfson Medical Center, Tel Gibrion, Holon, Israel |
| 112         | Mohammed Sabah         | Research Unit, Diabetes and Lipids Department, LINC MC, Heifa, Israel |
| 113         | Taiba Zornitsky        | Kaplan Medical Center, Rehovot, Israel |
| 114         | Victor Vishlitzky      | Meir Sapir Medical Center, Kfar-Saba, Israel |
| 115         | Anat Tsur              | Clalit Health Services management, Jerusalem, Israel |
| 116         | Faiad Adawi            | Ziv MC, Sefad, Israel |
| 117         | Raed Alami             | Saint Joseph Hospital, Jerusalem, Israel |
| 118         | Piermarco Piatti       | Ospedale San Raffaele IRCCS S R l, Milano, MI, Italy |
| 119         | Maurizio Trabito Bevilacqua | ASST Fatebenefratelli Sacco Ospedale Luigi Sacco, Milano, MI, Italy |
| 120         | Nicola Lucio Liberato  | Az.Ospedaliera della Prov.dI Papa Ospedale C. Mira, Casorate Primo, PV, Italy |
| 121         | Marianna Maranghi      | A O Policlinico Umberto I Universita La Sapienza, Roma, RM, Italy |
| 122         | Antimo Aiello          | Presidio Ospedaliero A. Cardarelli - ASREM Az.San.Reg.Moli, Campobasso, CB, Italy |
| 123         | Davide Lauro           | Fondaz.Polizicin.Tor Vergata-Univ. degli Studi Tor Vergata, Rome, RM, Italy |
| 124         | Paola Ponzani          | Stab Osp La Colletta Presidio Ospedal ASI L. Genovesi, Arenzano, GE, Italy |
| 125         | Paolo Desenzani        | ASST degli Spedali Civili Brescia-Pres.Osped. di Montichiari, Montichiari, BS, Italy |
| 126         | Kung-cho Yoon          | The Catholic University of Korea Seoul St Mary’s Hospital, Seoul, South Korea |
| 127         | Hyuksang Kwon          | The Catholic University of Korea Yeouido St. Mary’s Hospital, Seoul, South Korea |
| 128         | Jongmin Lee            | The Catholic University of Korea Daejeon St.Mary’s hospital, Daejeon, South Korea |
| 129         | Sundae Moon            | Incheon St. Mary’s hospital The Catholic University of Kore, Incheon, South Korea |
| Table A1 (Continued) |  |
|----------------------|-----------------------|
| Site number | Principal investigator | Institution |
| 130 | Soonjib Yoo | The Catholic University of Korea, Bucheon St.Mary Hospital, Bucheon, Gyeonggi-do, South Korea |
| 131 | Yubae Ahn | The Catholic University of Korea St. Vincent’s Hospital, Suwon, Gyeonggi-do, South Korea |
| 132 | Taeseo Sohn | Catholic University of Korea Uijeongbu St. Mary’s Hospital, Uijeongbu-Si, Gyeonggi-do, South Korea |
| 133 | Sangah Chang | The Catholic University of Korea St. Paul’s Hospital, Seoul, South Korea |
| 134 | Jelena Sokolova | Daugavpils Regional Hospital LTD, Daugavpils, Latvia |
| 135 | Ilze Lazgina | ap SANUS, Liepaja, Latvia |
| 136 | Dace Teterovska | Dr. Teterovska’s Private Practice in Endocrinology, Ogre, Latvia |
| 137 | Valdis Pirags | P Stradin Clinical University Hospital, Riga, Latvia |
| 138 | Inga Rezzale | Puls 5 Medical Centre, Riga, Latvia |
| 139 | Inta Leitane | SIA Rigas veselības center Tornakalns branch, Riga, Latvia |
| 140 | Valda Stalte | VSV Centrs, Talsi, Latvia |
| 141 | Sigita Pastare | Zemgales Diabetes Centre, Jelgava, Latvia |
| 142 | Laila Kudule | Riga Outpatient Clinic “Dziednieciba”, Riga, Latvia |
| 143 | Ruta Eglite | General Practice “R.Eglites Doktorats”, Kuldiga, Latvia |
| 144 | Agne Abraitiene | Vilnius University Hospital Santariskio Klinikos, Vilnius, Lithuania |
| 145 | Vaidotas Urbanavicius | Private Endocrinology Clinic, Vilnius, Lithuania |
| 146 | Jurate Lasiene | Hospital of Lithuanian University of Health Sciences Kaunas, Kaunas, Lithuania |
| 147 | Lina Radzeviene | Kaunas Dainavos Outpatient Clinic, Kaunas, Lithuania |
| 148 | Egle Urbanaviciene | Kaunas Silnios Outpatient Clinic, Kaunas, Lithuania |
| 149 | Kristina Balcramonaitiene | Kristavita UAB, Jonava, Lithuania |
| 150 | Ab Aziz Al-Safi Islam | Hospital Universiti Sains Malaysia, Kota Bahr, Kelantan, Malaysia |
| 151 | Ee Ming Khoo | University Malaya Medical Centre, Kuala Lumpur, Malaysia |
| 152 | Nor Azmi Kamarruddin | Hospital Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia |
| 153 | Leobardo Saque | Instituto de Diabetes, Obesidad y Nutricion S.C., Cuernavaca, Morelos, Mexico |
| 154 | Leobardo Saque | Instituto de Diabetes, Obesidad y Nutricion S.C., Cuautla, Morelos, Mexico |
| 155 | Sergio Hernandez | Instituto Nacional de Ciencias Medicas y Nutricion Salvador, Distrito Federal |
| 156 | Guadalupe Morales | Centro de Diabetes Durango, Durango, Mexico |
| 157 | Enrique Morales | Centro de Investigacion Cardiometabolica Ags, Aguascalientes, Mexico |
| 158 | Jorge Aldrete | Paracelus, S.A. de C.V., Mexico, Distrito Federal |
| 159 | Guillermo Fanghangel | Clinica integral del paciente diabetico, Ciudad De Mexico, Distrito Federal |
| 160 | Manuel Aguilera | Centro de Investigacion Biomedica y Farmaceutica, Mexico D.F, Distrito Federal |
| 161 | Juan Villagorda | Centro de Estudios Clinicos de Queretaro S.C., Queretaro, Mexico |
| 162 | Eli Heggen | Oslo Universitetssykehus HF, Ullevål, Oslo, Norway |
| 163 | Jorn Gronert | Flattum legesenter, Honfoss, Norway |
| 164 | Asad Uzzaman | Fet Legesenter AS, Fetsund, Norway |
| 165 | Lars-Erik Fikke | Enebakk legesenter, Enebakk, Norway |
| 166 | Rolf Johansen | Spikkestadlegene, Spikkestad, Norway |
| 167 | Marilyn Donato | CEDETER, Panama City, Panama |
| 168 | Pablo Fletcher | Private Clinic Dr. Pablo Fletcher, Panama City, Panama |
| 169 | Giselle Rodriguez | PAMRI Panama City, Panama |
| 170 | Angela Valdivia | Clinica Geriatrica del Ejercicio, Chorrillos, Lima, Peru |
| 171 | Cesar Delgado | Instituto Delgado de Investigacion Medica, Arequipa, Peru |
| 172 | Jose Solis | Hospital Nacional Arzobispo Loayza, Cercado de Lima, Lima, Peru |
| 173 | Miguel Pinto | Hospital Nacional Cayetano Heredia, San Martin de Porres, Lima, Peru |
| 174 | Luis More | Consultorio de Endocrinologia, San Isidro, Lima, Peru |
| 175 | Luis Camacho | Clinica Peruano Americana, Trujillo, La Libertad, Peru |
| 176 | Luis Zapata | Casa de Diabetes & Nutricion, Magdalena, Lima, Peru |
| 177 | Ma Concepcion Marcelo | Cardinal Santos Medical Center, San Juan City, Philippines |
| 178 | Cecilia Jimeno | San Juan de Dios Educational Foundation Inc. Hospital, Pasay City, Philippines |
| 179 | Elizabeth Catindig | Institute for Studies on Diabetes Foundation Inc, Makati, Metro Manila, Philippines |
| 180 | Tomas Lazatin, Jr | Quirino Memorial Medical Center, Quezon City, Metro Manila, Philippines |
| 181 | Roberto Mirasol | Rizal Medical Center, Pasig City, Philippines |
| 182 | Rhea Severina Comia | Aman Rodriguez Memorial Medical Center (ARMMC), Marikina City, Philippines |
| 183 | Malgorzata Rozyczka-Grundwicz | NZOZ Specialista Sp.z.o.o, Kutno, Poland |
| 184 | Ewa Krzyzgorska | Prakttyka Lekarska Ewa Krzyzgorska, Poznan, Poland |
| 185 | Maria Modzelewska | NZOZ DIAABMED, Poznan, Poland |
| 186 | Janusz Gumprecht | Gabinet Przywatny Prof. Janusz Gumprecht, Zabrze, Poland |
| 187 | Piotr Napor | Centrum Badan Klinicznych Piotr Napor Lekarze Sp., Wroclaw, Poland |
| 188 | Dorota Pisarczyk-Wiza | GAJA Poradnie Lekarskie Maciej Wiza, Poznan, Poland |
| 189 | Antonia Papa | Emergency County Hospital Orahova, Orahova, Jud. Bihor, Romania |
| 190 | Mihaela Popovicu | Medical Practice srl, Orahova, Jud. Bihor, Romania |
| 191 | Mihaela Voitec | Ambulatory of Institute of Nutrition Diseases and Diabetes, Bucharest, Romania |
| 192 | Adriana Dumitrescu | Medical Centre "Sanatatea ta", Bucharest, Romania |
### Table A1 (Continued)

| Site number | Principal investigator | Institution |
|-------------|------------------------|-------------|
| 193         | Cornelia Zetu         | Institute of Nutrition Diseases and Diabetes “N. Paulescu”, Bucharest, Romania |
| 194         | Bogdan Popa           | Spitalul Judean de Urgenta Ploiesti, Ploiesti, Jud. Prahova, Romania |
| 195         | Lavinia Ionutiu       | Centrul Medical Sf. Stefan SRL, Timisoara, Romania |
| 196         | Diana Alpenzide      | Out-patient City Clinic #117, St-Petersburg, Russia |
| 197         | Valeria Esp           | Consultation and Diagnostic Centre #85, St-Petersburg, Russia |
| 198         | Sergey Martsevich     | State Research Centre for Preventive Medicine, Moscow, Russia |
| 199         | Galina Reshedko       | Smolensk State Medical Academy of Roszdawr, Smolensk, Russia |
| 200         | Ruslan Sardinov       | Institute of Experimental Medicine, St- Petersburg, Russia |
| 201         | Sergey Shustov        | Military Medical Academy n.a.S.M Kirov, St-Petersburg, Russia |
| 202         | Yury Shwarts         | Saratov State Medical University of Roszdawr, Saratov, Russia |
| 203         | Natalia Vezikova      | Baranovs Republican Hospital, Petrozavodsk, Russia |
| 204         | Sergey Yakushin       | Ryazan State Medical University n.a.Pavlov, Ryazan, Russia |
| 205         | Olga Zanozina         | N.A.Semashko’s Regional Clinical Hospital of N.Novgorod, N.Novgorod, Russia |
| 206         | Marina Sergeeva-Kondrachenko | Penza Regional clinical hospital na Burdenko, Penza, Russia |
| 207         | Viera Donicova        | Human-Care S.R.O., Kosice, Slovakia |
| 208         | Katarina Belesova     | Lumedic S.R.O., Kosice, Slovakia |
| 209         | Maria Slovenska       | Vznútorné lekársstvo, diabetológia, poruchy látkovej premeny a, Kosice, Slovakia |
| 210         | Dana Sołowczuk        | DIAĐAN S.R.O., Ambulancia s odbornym zameraniam vnit.lekarstv, Kosice, Slovakia |
| 211         | Dalibor Sošovec       | DIAB S.R.O., Roznava, Slovakia |
| 212         | Dasa Skripova         | ARETEUS S.R.O. Diabetologicka ambulancia, Trebisov, Slovakia |
| 213         | Marek Macko           | Diabetol S.R.O., Presov, Slovakia |
| 214         | Livia Tomasova        | IN-DIA S.R.O., Lunecen, Slovakia |
| 215         | Drahoslava Kanderkova | MUDr. Kanderková S.R.O., Namestovo, Slovakia |
| 216         | Ingriš Buganova       | MEDIVAS s.r.o., Diabetologia, Zilina, Slovakia |
| 217         | Anna Vargova         | DIA-KONTROL S.R.O., Levie, Slovakia |
| 218         | Ladislav Pavlík       | DIA MEDICO S.R.O., Sala, Slovakia |
| 219         | Miriam Teplanova      | FUNKYSTUFF S.R.O., Nové Zámky, Slovakia |
| 220         | Jozef Srba            | Endiant S.R.O., Sered, Slovakia |
| 221         | Adriana Ilavská       | MEDISPEKTRUM s r o, Bratislava, Slovakia |
| 222         | Milan Behúncik        | Zeleznice zdravotníctvo, S.R.O. Kosice, Slovakia |
| 223         | Martina Merciakova    | MEDI-DIA S.R.O., Diabetológia ambulancia, Sabínov, Slovakia |
| 224         | Denisa Spodniakova    | DIASTYLE S.R.O. Interna-diabetologicka ambulancia, Banska Bystrica, Slovakia |
| 225         | Iveta Kurcova         | DIA Zilina S.R.O., Diabetologicka a interna ambulancia, Zilina, Slovakia |
| 226         | Olga Bensuova         | BENROD S.R.O., diabetologicka ambulancia, Sturovo, Slovakia |
| 227         | Aslam Amood          | Suite 215, Durban, South Africa |
| 228         | Magda Conradie       | Department of Endocrinology, Cape Town, South Africa |
| 229         | Deepak Lakha         | 1644 Starling Street, Johannesburg, South Africa |
| 230         | J Kok                | Cardiology Clinical Research, Alberton, South Africa |
| 231         | Hemant Makan         | Private Practice, Gauteng, South Africa |
| 232         | S Pillay             | Suite C5 Seadoon Mall, Durban, South Africa |
| 233         | Tasneem Vally        | Synexus SA Watermeyer Clinical Research, Pretoria, South Africa |
| 234         | Akbar Mahomed        | Dr A A Mahomed Medical Centre, Pretoria, South Africa |
| 235         | Luthando Adams       | LCS Clinical Research Unit, Johannesburg, South Africa |
| 236         | Xavier Cos Claramunt | CAP Sant Marti de Provençals, Barcelona, Spain |
| 237         | Carles Brotons Guixart | CAP SARDENYA, Barcelona, Spain |
| 238         | Jordi Inglá          | CAP Santa Coloma, Santa Coloma de Gramanet, Barcelona, Spain |
| 239         | Manel Mata           | CAP La Mina, Sant Adria del Besos, Barcelona, Spain |
| 240         | Wayne Huey-Herg Sheu  | Taichung Veterans General Hospital, Taichung, Taiwan |
| 241         | Jui-Hung Sun         | Chang Gung Memorial Hospital Linkou, Lin-Kou, Taiwan |
| 242         | Yi-Jen Hung          | Tri-Service General Hospital, Taipei, Taiwan |
| 243         | Dee Pei              | Cardial Tien Hospital, Hsin-tien, Taiwan |
| 244         | Nevin Dincag         | Istanbul University Istanbul Medical Faculty, Istanbul, Turkey |
| 245         | Mehmet Buyukbese     | Sutcu Imam University Medical Faculty, Kahramanmaraas, Turkey |
| 246         | Muysesser Sayki Arslan | S.B. Yildirim Beyazit Training and Research Hospital, Diskapi / Ankara, Turkey |
| 247         | Ramazan Sarı         | Akdeniz University Medical Faculty, Antalya, Turkey |
| 248         | Fusun Saygili        | Ege University Medical Faculty, Izmir, Turkey |
| 249         | Abdurrachman Comlekci | Dokuz Eylul University Medical Faculty, Izmir, Turkey |
| 250         | Senay Topsakal       | Pamukkale University Medical Faculty, Kınıklı / Denizli, Turkey |
| 251         | Hasan Kudat          | Istanbul University Istanbul Medical Faculty, Istanbul, Turkey |
| 252         | Murat Sert           | Cukurova University Medical Faculty, Adana, Turkey |
| 253         | Yagiz Uresin         | Istanbul University Istanbul Medical Faculty, Istanbul, Turkey |
| 254         | Zerrin Yigit         | Istanbul University Cardiology Institute, Istanbul, Turkey |