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OCULAR ONCOLOGY HAPPY HÔUR SYMPOSIUM







Program



Contents

| Welcome Address | 4 |
|---------------------------|----|
| Program | |
| Thursday 30.05 | 6 |
| Friday 31.05 | 10 |
| Saturday 1.06 | 12 |
| Index Chairs and Speakers | 18 |
| Oral Presentations | 26 |
| Poster Presentations | 38 |
| Index | 48 |
| General Information | 49 |
| Sponsors | 51 |





Dear Colleagues and friends,

It is with great pleasure to welcome you to the first combined conference, of the 1st Ocular Oncology Happy Hour Symposium (30th of May) with the 10th Annual European Retinoblastoma Meeting Group (31st of May - 1st of June) which will take place on May 30st to June 1st 2024, at the Divani Caravel Hotel, in Athens Greece.

During these three days distinguished worldwide Ocular Oncologists specialists will meet and share their knowledge and experience in the field of ocular oncology.

The Program will include keynote lecture and panel sessions on ocular oncology topics that will meet the interest of all delegates. We work tirelessly throughout these months to assemble a conference worthy of your time and expense. We promise to make it worth your while.

Apart from the scientific program, we will organize networking sessions and social events to facilitate interaction between friends and colleagues, as well as sponsors and exhibitors.

This year's EURBG meeting will be held in the beautiful city of Athens, Greece. Athens, the capital of Greece named after Athena, who was the goddess of wisdom and warfare, is a bustling and cosmopolitan metropolis and center of the economic, financial, industrial, political and cultural life of Greece. Located at the crossroads of three continents, Athens is a modern and vibrant city and it is among the most beautiful, hospitable and exciting European cities where there is so much to discover and see in this magnificent and historical city.

Looking forward to see you!

Maria Pefkianaki MD MSc MPH PhD FEBO Ocular Oncologist Adult & Pediatric



Program

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| | 09.00 - 10.00 | | |
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| 1 | 10.00 - 10.30 | OPENING CEREMONY | |
| I | | Marios Themistokleous, Deputy Minister of Health Greece. | |
| | | Giorgos Patoulis, President of Athens Medical Association. | |
| | | Dan Gombos, President of International Society of Ocular Oncology. | |
| | | Michail Nikolaou, Vice President The Hellenic Society of Medical Oncology (HeSMO). | |
| | | Theodora Psaltopoulou, Professor in Epidemiology and Preventive Medicine, National and Kapodistrian University of Athens, Athens, Greece. Board Member "Elpida" Children's Oncology Hospital- Association of Friends of Children with Cancer. | |
| | | Maria Moschovi, Associate Professor in Pediatric Hematology, National and Kapodistrian University of Athens, School of Medicine. | |
| | | Sofia Polychronopoulou, President of Hellenic Society of Pediatric Hematology-Oncology. Apostolis Papalois, Secretary G.Executive Board NASCE-European Union of Medical Specialists, Accreditation Board Member. | |
| | | Meghan Webber, President of Know the Glow. | |
| | | Georgia Kokkinou, Vice President of Floga, Parents' Association of Children with Cancer, Greece. | |
| | | Menia Koukougianni, Association Executive, Health Affairs Consultant, | |
| | | Co-Founder NGO Karkinaki, Awareness for Childhood & Adolesccent Cancer. | |
| | 10.30 - 11.20 | Co-Founder NGO Karkinaki, Awareness for Childhood & Adolesccent Cancer. | |
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| 11.20 - 11.40 | Break |
|--|--|
| 11.40 - 12.50 | UVEAL MELANOMA SESSION II |
| | Moderators: Martine Jager, Jens Kiilgard |
| 11.40 - 11.50 | Genetics in uveal melanoma Emine Kilic |
| 11.50 - 12.00 | Uveal melanoma: am i cured yet? Arun Singh |
| 12.00 - 12.10 | Ocular side effects of anti-cancer medication Vicky Dai |
| 12.10 - 12.20 | Relevance of eye colour in uveal melanoma patients Martine Jager |
| 12.20 - 12.40 | Metastatic uveal melanoma: new avenues Antonia Joussen |
| | |
| 12.40 - 12.50 | Discussion |
| 12.40 - 12.50 12.50 - 13.40 | Discussion UVEAL MELANOMA SESSION III |
| 12.40 - 12.50 12.50 - 13.40 | Discussion UVEAL MELANOMA SESSION III Moderators: Shahar Frenkel, Santosh Honavar |
| 12.40 - 12.50 12.50 - 13.40 12.50 - 13.00 | Discussion UVEAL MELANOMA SESSION III Moderators: Shahar Frenkel, Santosh Honavar Gamma knife and choroidal melanoma Francesco Bandello |
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| 12.40 - 12.50 12.50 - 13.40 12.50 - 13.00 13.00 - 13.10 13.10 - 13.20 13.20 - 13.30 | Discussion UVEAL MELANOMA SESSION III Moderators: Shahar Frenkel, Santosh Honavar Gamma knife and choroidal melanoma Francesco Bandello Surgical resection techiniques of uveal melanoma Nikolaos Bechrakis Plaque radiotherapy for small choroidal melanoma Mandeep Sagoo Radiation maculopathy Raffaele Parrozzani |
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| Moderators: Arun Singh, Jasmine Francis14.30 - 14.45Vascular tumors | |
|--|--|
| 14.30 - 14.45 Vascular tumors | |
| Jens Kiilgard | |
| 14.45 - 15.00 Other intraocular tumors Arun Singh | |
| 15.00 - 15.10 Discussion | |
| 15.10 - 15.50 ANTERIOR SEGMENT TUMORS | |
| Moderators: Sachin Salvi, Emine Kilic | |
| 15.10 - 15.25 Ocular surface squamous neoplasia (OSSN) Swathi Kaliki | |
| 15.25 - 15.40 Conjunctival melanoma Shahar Frenkel | |
| 15.40 - 15.50 Discussion | |
| 15.50 - 16.20 KEYNOTE LECTURE | |
| Moderator: Mandeep Sagoo | |
| Vitreoretinal lymphoma Jacob J. Pe'er | |
| 16.20 - 16.50 Break | |
| 16.50 - 17.40 ORBITAL TUMORS | |
| Moderators: Kostas Boboridis, Swathi Kaliki | |
| 16.50 - 17.00Oncological principles can optimize the outcome in orbital tumors Santosh Honavar | |
| 17.00 - 17.10 Imaging in orbital tumors Eustathios Dettorakis | |
| 17.10 - 17.20 Orbital lymphoma Christos Kalogeropoulos | |
| 17.20 - 17.30 Pediatric orbital tumors Sachin Salvi | |
| 17.30 - 17.40 Discussion | |



| 17.40 - 18.10 | FREE PAPER SESSION |
|---------------|---|
| | Moderators: Marilita Moschos, Bhavna Chawla |
| 001 | INFLAMMATORY CLINICAL MANIFESTATIONS IN INTRAOCULAR MALIGNANCIES Di Nicola M. Bascom Palmer Eye Institute, University of Miami, Miller School of Medicine |
| 002 | PRESENCE OF TUMOUR DNA IN AQUEOUS HUMOR SAMPLES FROM UVEAL MELANOMA PATIENTS IS HIGHLY CORRELATED WITH MONOSOMY 3 Barwinski N. ¹ , Jabbarli L. ² , Fiorentzis M. ² , Bechrakis N. ² , Lohmann D. ¹ , Le Guin C. ² , Zeschnigk M. ¹ ¹ Institute of Human Genetics, University Hospital Essen, University Duisburg-Essen ² Department of Ophthalmology, University Hospital Essen, University Duisburg-Essen |
| 003 | ANTERIOR SEGMENT SWEPT-SOURCE OPTICAL COHERENCE TOMOGRAPHY IN CONJUNCTIVAL EPITHELIAL TUMORS AND SIMULATING LESIONS AND CORRELATION WITH HISTOPATHOLOGIC DIAGNOSIS Yesiltas Y. ¹ , Gunduz A. ² ¹ Department of Ophthalmology, University of Health Sciences, Gulhane Training and Research Hospital ² Department of Ophthalmology, Ankara University Faculty of Medicine |
| 18.10 | END OF DAY'S MEETING |
| 18.10 - 20.00 | WELCOME RECEPTION |
| | |





| 09.00 - 13.30 | |
|---------------|---|
| 13.30 - 14.30 | Light Lunch |
| 14.30 - 14.40 | OPENING SPEECH |
| | Guillermo Chantada |
| 14.40 - 15.30 | BASIC SCIENCE AND RETINOBLASTOMA |
| | Moderators: Annette Moll, Jesse Berry |
| 14.40 - 14.50 | Blood based cell - Free dna in retinoblastoma Jasmine Francis |
| 14.50 - 15.00 | Proteomics a source of biomarkers in retinoblastoma patient Angela Galardi |
| 15.00 - 15.10 | Harnessing the power of patient specific organoids to discover new therapeutic treatments for retinoblastoma Agatha Rozanska |
| 15.10 - 15.20 | Aqueous liquid biopsy in retinoblastoma Jesse Berry |
| 15.20 - 15.30 | Discussion |
| 15.30 - 16.00 | KEYNOTE LECTURE |
| | Moderator: Maria Pefkianaki |
| | Intrarterial chemotherapy - What we have learned after 18 years David Abramson |
| | |





| 16.00 - 16.30 | Break | |
|---------------|---|--|
| 16.30 - 17.00 | CHEMOTHERAPY TREATMENT IN RETINOBLASTOMA PATIENTS | |
| | Moderators: Vicky Dai, Bhavna Chawla | |
| 16.30 - 16.50 | Chemotherapy for retinoblastoma: from protest to triumph Carol Shields | |
| 16.50 - 17.00 | Discussion | |
| 17.00 - 17.40 | RADIATION THERAPY AND RETINOBLASTOMA | |
| | Moderators: Mandeep Sagoo, Francis Munier | |
| 17.00 - 17.10 | Plaque and retinblastoma Shahar Frenkel | |
| 17.10 - 17.20 | Plaque and pediatric ocular tumours Mandeep Sagoo | |
| 17.20 - 17.30 | Role of radiotherapy for retinoblastoma today Swathi Kaliki | |
| 17.30 - 17.40 | Discussion | |
| 17.40 - 18.15 | RETINOBLASTOMA COLLABORATION SESSION | |
| | Moderators: Swathi Kaliki, Ashwin Reddy | |
| 17.40 - 17.50 | Global retinoblastoma Didi Fabian | |
| 17.50 - 18.00 | Trans atlantic collaboration in retinoblastoma between COG and euro-retinoblastoma Dan Gombos | |
| 18.00 - 18.15 | Discussion | |
| 18.15 | END OF DAY'S MEETING | |
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| 09.00 - 10.00 | PEDIATRIC ONCOLOGY |
|---------------|---|
| | RETINOBLASTOMA TREATMENT OVERVIEW AND UPDATES |
| | Moderators: François Doz, Stefanos Intzes |
| 09.00 - 09.10 | Trilateral retinoblastoma Maja Beck-Popovic |
| 09.10 - 09.20 | Adjuvant therapy for retinoblastoma - Who needs how much treatment? Petra Ketteler |
| 09.20 - 09.30 | Study of biological parameters in patients treated by first line enucleation for unilateral retinoblastoma François Doz |
| 09.30 - 09.40 | Treatment of metastatic retinoblastoma Helen Jenkinson |
| 09.40 - 09.50 | Cancer surveillance in genetic retinoblastoma patients Antonis Kattamis |
| 09.50 - 10.00 | Discussion |
| 10 00 - 10 50 | ROLE OF OCT AND RETINOBLASTOMA |
| 10.00 | Moderators: Dan Gombos, Manoj Parulekar |
| 10.00 - 10.05 | Role of OCT in diagnosis of retinoblastoma |
| 10.05 - 10.10 | Ruling out simulating lesions |
| 10.10 - 10.15 | Guiding treatment |
| 10.15 - 10.20 | Monitoring and maximising vision in retinoblastoma |
| | Speakers: Maria Kirk, Joe Abbott, Sam Gurney |
| 10.20 - 10.50 | Discussion |
| 10.50 - 11.20 | Break |



| 11.20 - 12.00 | RETINOBLASTOMA LECTURES |
|--------------------------------|--|
| | Moderators: Annette Moll, Arun Singh |
| 11.20 - 11.30 | Screening of children at risk for familiar retinoblastoma Annette Moll |
| 11.30 - 11.40 | Newborn genetic screening for retinoblastoma - Belgian study baby detect Paulina Bartoszec |
| 11.40 - 11.50 | Vision and retinoblastoma after intraarterial therapy Ashwin Reddy |
| 11.50 - 12.00 | Discussion |
| | |
| 12.00 - 12.50 | CHALLENGES IN RETINOBLASTOMA TREATMENT |
| | Moderators: Francis Munier, Jasmine Francis |
| 12.00 - 12.10 | Diffuse infiltrating retinoblastoma: a phenotypic and therapeutic update Francis Munier |
| 12.10 - 12.20 | Enucleation is not the end. The high-risk retinoblastoma protocol Santosh Honavar |
| 12.20 - 12.30 | Challenges of extraocular retinoblastoma Bhavna Chawla |
| | |
| 12.30 - 12.40 | Group E in retinoblastoma Arun Singh |
| 12.30 - 12.40 12.40 - 12.50 | Group E in retinoblastoma Arun Singh Discussion |

12.50 - 13.50 Ligi







| 13.50 - 14.30 | INTERVENTIONAL RADIOLOGY SESSION PEARLS AND PITFALLS OF INTRAARTERIAL CHEMOTHERAPY FOR RETINOBLASTOMA Moderators: Stavros Spiliopoulos, Shahar Frenkel |
|---------------|---|
| 13.50 - 14.00 | Fifteen years experience of intra-arterial chemotherapy for retinoblastoma Rafael Blanc |
| 14.00 - 14.10 | Intra-arterial chemotherapy. Current evidence Stavros Spiliopoulos |
| 14.10 - 14.20 | Vascular anatomical variants Fergus Robertson |
| 14.20 - 14.30 | Discussion |
| 14.30 - 15.00 | KEYNOTE LECTURE |
| | Moderators: David Abramson, Santosh Honavar |
| | Intraocular surgery in active and inactive retinoblastoma cases Manoj Parulekar |







| 15.30 - 16.00 | IMAGING IN PEDIATRIC OCULAR ONCOLOGY SESSION |
|---|--|
| | Moderators: Efi Alexopoulou, Maja Beck-Popovic |
| 15.30 - 15.40 | Advances in Imaging in pediatric ocular oncology Pim de Graaf |
| 15.40 - 15.50 | Imaging of retinoblastoma and of related secondary malignancies Katerina Kanavaki |
| 15.50 - 16.00 | Discussion |
| 16.00 - 16.50 | VIDEO AND FREE PAPER SESSION |
| | Moderators: Jesse Berry, Bhavna Chawla |
| 004 | PSYCHOSOCIAL SUPPORT NEEDS REPORTED BY CANADIAN RETINOBLASTOMA SURVIVORS AND CAREGIVERS: A PILOT STUDY Flegg K., Al Hammadi M., Zouridaki E., Ristevski I., Noronha R., Dimaras H. |
| 005 | The Hospital for Sick Children/University of Toronto THE INCIDENCE OF RHEGMATOGENOUS RETINAL DETACHMENT FOLLOWING CRYOTHERAPY IN RETINOBLASTOMA <u>Kim Y.</u>¹, Negretti G.^{2,3}, Sagoo M.^{2,3,4}, Reddy M.^{1,2} ¹Barts and the London School of Medicine and Dentistry, Queen Mary University of London ²Judith Kingston Retinoblastoma Unit, The Royal London Hospital, Barts Health NHS Trust ³Department of Ocular Oncology, Moorfields Eye Hospital ⁴UCL Institute of Ophthalmology |
| | |
| OCULAR ONCOLOGY CENTER Adult & Pediatric Greece | 15 |



006

RESULTS FROM AIEOP RTB 012 PROTOCOL IN HIGH-RISK INTRAOCULAR RETINOBLASTOMA

Di Ruscio V.¹, Del Baldo G.¹, Valente P.², Di Giannatale A.¹, De Pasquale M.¹, Cefalo M.¹, De Vito R.³, Longo D.⁴, Carboni A.⁴, Cozza R.¹, Natali G.⁵, D'Elia G.⁶, Milano G.¹, Mastronuzzi A.¹, Romanzo A.², **Russo I.**¹

¹Department of Onco-Hematology, Cell and Gene Therapies, Bambino Gesù Children's Hospital, IRCCS

²Ophthalmology Department, Bambino Gesù IRCCS Children's Hospital ³Department of Pathological Anatomy, Bambino Gesù Children Hospital, IRCCS

⁴Neuroradiology Unit, Department of Imaging, Bambino Gesù Children's Hospital, IRCCS

⁵Interventional Radiology Unit in Oncohematology, Department of Imaging, Bambino Gesù Children's Hospital, IRCCS

⁶Cytogenetics and Molecular Genetics Unit, Bambino Gesù Children's Hospital, IRCCS

007

RETINOBLASTOMA STAGE E: COMPARISON OF TWO INTRAARTERIAL CHEMOTHERAPY ERAS WITH OR WITHOUT INTRAVITREAL CHEMOTHERAPY - 16 YEARS EXPERIENCE

<u>Hadjistilianou T.</u>¹, Caini M., Campisano M., De Francesco S., Marini D., Bracco S., Gennari P., Cioni S., Vallone I., Cerase A., Monti L., Sugamiele F., Galimberti D., Galluzzi P. ¹University of Siena Ocular Oncology Unit ²Unit of Pediatrics, Siena ³Unit of Neuroradiology, Siena

800

INTRA- AND PERIOCULAR SURGERY IN ACTIVE AND INACTIVE RETINOBLASTOMA

Bechrakis N.¹, Al-Ghazzawi K., Kiefer T., Jabbarli L., Ketteler P., Biewald E.

¹University Hospital Essen





| 009 | UTILITY OF CARBOPLATIN THERAPEUTIC DRUG MONITORING FOR THE TREATMENT OF NEONATE AND INFANT RETINOBLASTOMA PATIENTS IN THE UNITED KINGDOM |
|-----|---|
| | Millen G. ¹ , Lawford A. ² , Duncan C. ² , Barnett S. ³ , Veal G. ³ |
| | ¹ Department of Paediatric Oncology, Birmingham Womens and Childrens Hospital |
| | ² Department of Paediatric Oncology, Great Ormond Street Hospital |
| | ³ Newcastle University Centre for Cancer, Newcastle University |
| 010 | HOW THE COVID PANDEMIA HELPED TO START |
| | A RETINOBLASTOMA CENTER IN BUCHAREST |
| | Nitulescu E. |
| | Emergency children's Hospilal Maria Skiodowska curie |
| 011 | ADDITION OF INTRAVITREAL CARBOPLATIN WITH |
| | MELPHALAN FOR MANAGEMENT OF VITREOUS SEEDING |
| | IN RETINOBLASTOMA |
| | <u>Masoomian B.</u> ¹ , L.Shields C. ² , Ghassemi F. ¹ , Riazi-Esfehani H. ¹ ¹ Farabi Eye Hospital, ² Wills Eye Hospital |
| | |
| | |

16.50-17.00 CLOSING REMARKS - END OF THE MEETING



Abbot Joe

Consultant Paediatric Ophthalmologist, Birmingham Children's Hospital NHS Foundation Trust, Birmingham, United Kingdom.

Abramson David

Director Ocular Oncology Service Memorial Sloan Kettering Cancer Center, New York, USA. Tenured Professor in Surgery, Pediatrics and Radiation Oncology, Professor of Ophthalmology WeilCornell Medical School, USA.

Alexopoulou Efthymia

Professor of Pediatric Radiology, University General Hospital "Attikon", National and Kapodistrian University of Athens, Athens, Greece.

Balaguer Julia

Pediatric Oncology and Hematology Unit, La Fe University Hospital, Valencia, Spain.

Bandello Francesco

Full Professor and Director of the Department of Ophthalmology University Vita Salute, San Raffaele Scientific Institute Milano, Milan, Italy. Academic Dean, University Vita Salute,

Scientific Institute San Raffaele, Milan, Italy.

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Bechrakis Nikolaos

Professor of Ophthalmology and Chairman of the Department of Ophthalmology of Essen University Hospital, Essen, Germany.

Berry Jesse

Chair in Ocular Oncology, Berle and Lucy Adams Chair in Cancer Research. Associate Professor of Ophthalmology Clinical Scholar Vice Chair, Academic Affairs, Department of Surgery, The Vision Center at Children's Hospital Los Angeles, USA. Ocular Oncology, USC Roski Eye Institute, Keck School of Medicine of USC, Los Angeles, USA.

Blanc Rafael

Professor of Ophthalmology, Singapore National Eye Centre and Duke, NUS Medical School of Interventional Neuro, Radiology Department, Creil Hospital, Paris, France.

Boboridis Kostas

Assistant Professor of Ophthalmology, Aristotle University of Thessaloniki, Thessaloniki, Greece.

Chantada Guillermo

President of the International Society of Paediatric Oncology (SIOP). Head Outreach Program Pediatric Cancer Center Barcelona-PCCB, Barcelona-Spain. Principal Researcher of the National Council of Research in Argentina (CONICET).

Chawla Bhavna

Professor of Ophthalmology at All India Institute of Medical Sciences, New Delhi, India. Retinoblastoma and Ocular Oncology Service, India Institute of Medical Sciences (AIIMS), New Delhi, India.



Clifton Charlotte

Clinical Nurse Specialist, Barts Health, Ware, United Kingdom.

De Graaf Pim

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Detorakis Efstathios

Professor of Ophthalmology, University Hospital of Heraklion, Heraklion, Greece.

Dorsman Josephine

Research Associate, Amsterdam Reproduction & Development (AR&D), CCA - Cancer Biology and Immunology, Amsterdam, Netherlands.

Doz François

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Fabian Ido Didi

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Golmard Lisa

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Gombos Dan

President of International Society of Ocular Oncology. Professor & Chief, Section of Ophthalmology. University of Texas, MD.

Gurney Sam

Consultant Ophthalmologist, Birmingham Children's Hospital, Birmingham, UK.

Honavar Santosh

Head Department of Orbit, Ocular Oncology, Ophthalmic and Facial Plastic Surgery, Centre for Sight, Hyderabad, India.



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Jager Martine

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Koenig Monika

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Kokkinou Georgia

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Koukougianni Menia

Association Executive, Health Affairs Consultant, Co-Founder NGO Karkinaki, Awareness for Childhood & Adolesccent Cancer, Greece.

Leiman Erika

Board Member Retinostop, Know the Glow.

Lumbroso-Le Rouic Livia

Consultant Ocular Oncologist Institut Curie, Paris, France.

Millen Gerard

Consultant Paediatric Oncologist, Birmingham Children's Hospital, Birmingham, UK.

Moll Annette

Professor of Ophthalmology, Amsterdam University Medical Centers, Amsterdam, Netherlands. Ophthalmology Residency Program Director, Co-founder of the Dutch Retinoblastoma Expertise Center, Head of the Retinoblastoma Research Group, Amsterdam, Netherlands.

Moschos Marilita

Associate Professor of Ophthalmology, University of Athens, Athens, Greece.

Moschovi Maria

Associate Professor in Pediatric Hematology, National and Kapodistrian University of Athens, School of Medicine, Athens, Greece.

Mruthyunjaya Prithvi

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Munier Francis

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Nikolaou Michail

Vice President The Hellenic Society of Medical Oncology (HeSMO).

Papalois Apostolis

Secretary G.Executive Board NASCE-European Union of Medical Specialists, Accreditation Board Member.

Parrozzani Raffaele

Professor of Ophthalmology and Eye Disease, Department of Neuroscience-DNS, University of Padova, Padova, Italy.

Parulekar Manoj

Consultant Ophthalmic Surgeon, Specialist in Retinoblastoma, Birmingham Womens & Children's Hospital and the Oxford University Hospitals NHS Trust, Birmingham, UK.

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Oral Presentations

THIN



001 INFLAMMATORY CLINICAL MANIFESTATIONS IN INTRAOCULAR MALIGNANCIES Di Nicola M

Di Nicola M.

Bascom Palmer Eye Institute University of Miami Miller School of Medicine

Introduction and aim of the study: The aim of the study is to describe atypical clinical inflammatory presentations including choroidal detachments, scleritis, and orbital inflammation associated with necrotic choroidal metastasis or melanoma.

Methods: We conducted a retrospective case series of patients seen in multiple centers including University of Cincinnati, Bascom Palmer Eye Institute and Moran Eye Center.

Results: We report a total of 6 patients with atypical inflammatory manifestations. Of these, 4 patients presented with pain, scleritis and choroidal detachment with an underlying malignant choroidal tumor (both choroidal melanoma and metastases). The remaining 2 patients demonstrated orbital inflammation with eyelid edema and conjunctival chemosis, one related to a choroidal melanoma with a large extraocular component and one to significant rapid growth with subsequent necrosis of a choroidal melanoma. Five patients underwent fine-needle aspiration biopsy for cytopathologic characterization of their choroidal tumor, with 2 eventually undergoing enucleation, and they all demonstrated evidence of tumor necrosis. Two patients were diagnosed with choroidal metastasis from lung and esophageal adenocarcinoma. Both patients ultimately expired from systemic metastasis. The remaining 4 patients were diagnosed with choroidal melanoma and were successfully treated with either plaque radiotherapy or enucleation.

Conclusion: While intraocular choroidal malignancies usually present with painless vision loss, atypical inflammatory presentations such as choroidal detachment, concurrent scleritis, and orbital inflammation can rarely occur as a sequelae of tumor necrosis of an underlying choroidal malignancy.





002 PRESENCE OF TUMOUR DNA IN AQUEOUS HUMOR SAMPLES FROM UVEAL MELANOMA PATIENTS IS HIGHLY CORRELATED WITH MONOSOMY 3 <u>Barwinski N.</u>¹, Jabbarli L.², Fiorentzis M.², Bechrakis N.², Lohmann D.¹, Le Guin C.², Zeschnigk M.¹

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Uveal Melanoma (UM) is a rare cancer but the most common primary intraocular tumour in adults. Most UMs fall into one of two classes that show distinct genetic features and are highly correlated with prognosis. Monosomy 3, a distinctive feature of UM class two, is strongly associated with a poor prognosis. Currently, testing this biomarker in smaller tumours requires a tissue biopsy. The sampling procedure of tumour tissue is invasive and may cause side effects like bleeding, retinal detachment, or tumour cell seeding. Therefore, less invasive methods to obtain tumour-derived DNA are desirable.

We isolated DNA from aqueous humor (AH) or vitreous body aspirate (VB) specimens taken from 98 UM patients treated by enucleation or endoresection. The level of tumor DNA was determined by deep amplicon sequencing targeting oncogenic variants in GNAQ and GNA11 on Illumina MiniSeq with a mean coverage of around 120k-fold. To determine the proportion of variant alleles (VAF) in each sample we developed a Snakemake pipeline for analysis of FASTQ files.

In 42 of 93 VB samples (45%) and in 22 of 82 samples from AH (27%) variants in either GNAQ or GNA11 affecting position p.Q209 were detected (see figure) with VAFs ranging from 0.15% to 50%. In AH, tumour DNA was almost exclusively found in patients with a monosomy 3 UM.



At time of diagnosis of the primary tumor about half of the patients showed high levels of tumour-derived DNA in either AH or VB or both specimen. Larger studies need to show whether the presence of tumour DNA in AH can serve as surrogate marker for monosomy 3 and thus be a valid marker for a poor prognosis. Furthermore, it must be evaluated if tumor DNA can also be found in AH and VB derived from eyes treated by eye preserving methods.





003 ANTERIOR SEGMENT SWEPT-SOURCE OPTICAL COHERENCE TOMOGRAPHY IN CONJUNCTIVAL EPITHELIAL TUMORS AND SIMULATING LESIONS AND CORRELATION WITH HISTOPATHOLOGIC DIAGNOSIS

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Introduction and aims of the study: Anterior segment optical coherence tomography has emerged a noninvasive tool capable of providing an optical biopsy of tissue, where morphologic and even histologic characteristics can be examined in vitro. This study aims to report anterior segment swept-source optical coherence tomography (AS SS-OCT) findings in conjunctival epithelial tumors (ocular surface squamous neoplasia (OSSN), conjunctival papilloma, and conjunctival epithelial hyperplasia) and simulating lesions (pterygium, pseudopterygium, and pinguecula) that were imaged using AS SS-OCT and correlate the results with histopathological examination findings in those cases that underwent biopsy.

Methods: AS SS-OCT imaging data and histopathologic diagnoses from 44 eyes of 42 cases between September 2018 and April 2023 were evaluated.

Results: AS SS-OCT imaging revealed notable correlations with histopathological specimens for OSSN and simulating lesions. In OSSN, AS SS-OCT findings included epithelial hyperreflectivity, epithelial thickening, and an abrupt transition between normal and abnormal epithelium, whereas pterygium and pinguecula showed a subepithelial hyperreflective mass under normal/slightly thickened epithelium. Differences between median maximal epithelial thickness on AS SS-OCT for OSSN and pterygium (560 vs 102µm), OSSN and pseudopterygium (560 vs 113µm), OSSN and pinguecula (560 vs 72.5µm), and OSSN and conjunctival papilloma (560 vs 965.5µm) were statistically significant (p<0.001 for all, except p=0.039 for OSSN vs conjunctival papilloma). By receiver operating characteristic curve, using 630.5µm as a cutoff, the sensitivity and specificity of AS SS-OCT for differentiating between conjunctival papilloma and OSSN was 69% and 100%, respectively (p=0.038). The presence of hyporeflective spaces/cysts was statistically significant in cases with conjunctival papilloma compared to cases with OSSN (p<0.001).

Conclusions: AS SS-OCT serves as a valuable noninvasive adjunctive tool for distinguishing OSSN from pterygium/papilloma, providing in vitro "optical biopsy" features.





004 PSYCHOSOCIAL SUPPORT NEEDS REPORTED BY CANADIAN RETINOBLASTOMA SURVIVORS AND CAREGIVERS: A PILOT STUDY

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Background and Aims: Retinoblastoma guidelines promote the provision of psychosocial support to affected families, yet anecdotally, families indicate psychosocial support available to them requires improvement. Furthermore, the precise psychosocial support needs of people affected by retinoblastoma are unclear. We aimed to determine the informational and service needs of retinoblastoma survivors and caregivers and to uncover which needs are met or unmet.

Methods: This was a quantitative, cross-sectional study. Eligible participants were retinoblastoma caregivers or survivors ≥ 16 years old in Canada. Participants completed an online questionnaire collecting data on participant demographics, distress and use of and need for psychosocial support. The primary outcome measure was the proportion of retinoblastoma survivors with ≥ 1 unmet psychosocial support need.

Results: Sixty-four individuals participated in the study (24 survivors, 40 caregivers). Mean(median) self-report scores on the Distress Thermometer for were 4.18(3.5) for survivors and 4.5(5) for caregivers, respectively. The proportion of participants with \geq 1 unmet informational need was 21% for survivors and 81% for caregivers. The average number of information needs was 1.0 (SD ±1.7) for survivors and 7.3 (SD ±3.5) for caregivers. The proportion of participants with \geq 1 unmet service need was 37% for survivors and 88% for caregivers. The average number of service needs was 1.7 (SD ±2.3) for survivors and 4.3 (SD ±3.1) for caregivers. The most commonly stated information need for both groups was for long-term screening for second cancers. The most commonly stated service need navigating long-term treatment and follow-up for survivors, and family counseling for caregivers.

Conclusion: Caregivers report a more unmet psychosocial support needs than survivors. Clinical and research teams should focus on filling gaps in care related to related to second cancer screening, continuation of care into adulthood and family counseling.





005 THE INCIDENCE OF RHEGMATOGENOUS RETINAL DETACHMENT FOLLOWING CRYOTHERAPY IN RETINOBLASTOMA

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Introduction and aims of the study: Rhegmatogenous retinal detachment (RRD) is a vision-threatening complication of cryotherapy in retinoblastoma management. This study aims to elucidate the incidence and characteristics of RRD following cryotherapy.

Methods: A retrospective review was conducted on retinoblastoma patients presenting between January 2013 and December 2022 at the Royal London Hospital, United Kingdom, a tertiary referral centre for retinoblastoma. All eyes that received cryotherapy were included with a minimum of 1-year follow up. Patient demographics, tumour characteristics, treatment history and cryotherapy applications were compared between eyes with and without RRD. Characteristics of RRD cases were analysed, including extent, macula involvement, resolution status and visual outcomes. Other vitreoretinal complications and their associated cryotherapy applications were also noted.

Results: Among 124 eyes of 92 patients that received cryotherapy, RRD occurred in seven eyes (5.6%). Three cases persisted (2.4%), while four resolved spontaneously (3.2%). Eyes with RRD received fewer cryotherapy applications as compared to eyes without RRD (mean (median): 11.0 (5) vs 16.0 (9)), but no significant association was found between the number of cryotherapy applications and RRD incidence (p=0.179). Conversely, increased cryotherapy applications correlated with vitreous haemorrhage occurrence (p=0.009). Median time for RRD to occur since final cryotherapy was one month (range 0.5-104). Initial presentation of all RRD cases showed no macula involvement. Management for persistent RRD cases (n=3), was barrier laser retinopexy (n=1), enucleation (n=1) and observation (n=1). Final vision in globe-salvaged RRD cases (n=6) ranged from Snellen 6/9.5 to 6/95.

Conclusion: Post-cryotherapy RRD incidence is low, increased cryotherapy applications does not increase the risk of RRD, and if RRD does occur following cryotherapy, it can spontaneously resolve (4/7 resolved spontaneously in this series).





006 RESULTS FROM AIEOP RTB 012 PROTOCOL IN HIGH-RISK INTRAOCULAR RETINOBLASTOMA

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Introduction: Conservative therapies for intraocular retinoblastoma (RB), represent nowadays the standard to reach out. Recently, oncologic protocols include a combination of systemic chemotherapy (CT) plus focal treatments.

The results in high-risk RB (HR-RB) patients enrolled into AIEOP RTB012 Protocol from 2012 to 2018were reported.

Methods: All patients with HR-RBwere treated according to the protocol with neo-adjuvant intravenous CT, (four cycles of carboplatin and etoposide). Patients progressed or relapsed underwent intravitreal/intraarteriolar (IA/IV) CT.

Primary endpoint aimed to determine Eye- Event Free Survival (Eye-EFS) and Eye Overall Survival (Eye-OS) at 24 months. Visual outcome was analysed in all available patients.

Results: Eighty-eight eyes with HR-RB (32 monolateral, 28 bilateral) from 60 patients were collected. According to International Intraocular Retinoblastoma Classification (IIRC) we reported12 group A/B (as per bilateral), 15group C, 40group D and 21 group E.

At the end of neo-adjuvant CT,61eyes had progressed/relapsed, of whom 39 were treated with IA/IVCT. No significant toxicities treatment-related had been reported.

With a median follow-up of 92 months (range 24-139 months) 42 eyes were saved and 46enucleated. The 24 months Eye-EFSand Eye- OS were 36.4% and 63.6%, respectively.

Among group C and D we reported an Eye-EFS of 53% and 35% and anEye-OSto86.7% and 65%, respectively. The use of IA/IV CT permitted to increase Eye-OS.

Concerning visual outcome in bilateral disease with at least one eye preserved, 10/22 eyes obtained a visual acuity > 7/10.

Conclusions: Our results showed that IA/IVCT as salvage treatments permitted good tumor control and better eye-survival in HR-RB after neo-adjuvant CT, highlighting this approach as a valid and safe option in this subset of patients. This approach provided a satisfactory visual outcome.





007 RETINOBLASTOMA STAGE E: COMPARISON OF TWO INTRAARTERIAL CHEMOTHERAPY ERAS WITH OR WITHOUT INTRAVITREAL CHEMOTHERAPY -16 YEARS EXPERIENCE

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Introduction and Aims of the Study: To describe the effectiveness of intravitreal chemotherapy (IViC) alternating with intra-arterial chemotherapy (IAC) in Retinoblastomas (RB) Stage E presenting persistent or recurrent vitreous seeding.

Methods: Two groups of patients were examined: between 2008-2011 (pre-IViC era) and between 2012-2023 (IViC era), all classified as stage E according to the IIRC classification and consecutively treated in the tertiary RB referral center University of Siena. Outcomes in terms of ocular survival (globe salvage rate, GSR) were compared between the two periods.

Results and Discussion: A total of 24 eyes during the Pre-IViC era were included: 14 eyes without seeding at diagnosis, of which 6 were saved (25%) after first-line (CHT) and second-line therapy (IAC); and 10 eyes with seeding underwent all to enucleation either at diagnosis or after first- and second-line therapy.

A total of 85 eyes during the IViC-era were included: 13 eyes were enucleated at diagnosis and 8 after firstline therapy (CHT or IAC) and 14 are currently in remission. Thereafter, 37 eyes with active vitreous seeding underwent IViC plus IAC, of which 25 eyes are currently in remission (68%); while 13 eyes without seeding underwent only IAC, of which 9 eyes are in remission (69%).

Conclusions: Vitreous seeding is a primary limiting factor threatening the globe salvage in advanced RB, as diffuse vitreous infiltration is typically resistant to standard systemic and intra-arterial therapy leading to a poor outcome. The introduction of IViC associated with IAC in our experience has enabled to effectively treat 74% of Stage E RB with active vitreous seeding after the first-line therapy, and 70% after the second-line therapy, in contrast to overall 25% during the Pre-IViC era.





008 INTRA- AND PERIOCULAR SURGERY IN ACTIVE AND INACTIVE RETINOBLASTOMA

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Purpose: To determine the outcomes and the ocular and systemic complications of surgery in retinoblastoma diseased eyes

Design: Retrospective case series

Methods: Patients with retinoblastoma who underwent surgery for retinal detachment, secondary cataract or tumor treatment between 2022 and 2024 have been reviewed

Results: Eight eyes of 8 RB patients were included. Two patients received buckle surgery for retinal detachment, 3 patients had lens replacing vitrectomy and 2 received endoresection of the retinoblastoma. One one-eyed patient received cataract surgery at the age of 10. The mean age at retinoblastoma diagnosis was 15 months (median: 19).

Two patients received Endoresection of the retinoblastoma. First patient was a late onset bilateral retinoblastoma 48 years after enucleation of the unilateral retinoblastoma at the age of 3. The second patient showed a recurrence of the RB in his only eye 12 years after external beam radiotherapy.

The adult retinoblastoma patient receiving endoresection after local irradiation of the tumor developed intraocular recurrence 24 months after surgery, managed via local brachytherapy. No extraocular extension, or metastasis was noted until now.

Buckle surgery in retinal detachment was at a mean age of 2,5 years. In the first case secondary to polychemotherapy (n = 6 cycles), brachytherapy (n = 1), laser thermotherapy (n=5), cryotherapy (n=4). The second patient as secondary complication to polychemotherapy (n = 5 cycles) with laser treatement (n=2), intra-arterial chemotherapy (n=3) and cryotherapy (n = 1).

Phacoemulsification with IOL implantation was performed for radiotherapy associated cataract at a mean age of 8,8 years. Lensectomy of posterior sub-capsular cataract was performed in two patients secondary to proton beam radiation, of which one also received a pars-plana vitrectomy due to membrane related ciliary body displacement and hypotension.

Conclusions: Modern retinoblastoma therapies, including proton beam therapy and interatrial chemotherapy, can cause secondary complications, that might require further surgical interventions. Following surgery other than endoresection, intraocular recurrence has not been noted until now. Challenges include biometry limitations, risk of extraocular tumor growth and possible active tumor dissemination.





009 UTILITY OF CARBOPLATIN THERAPEUTIC DRUG MONITORING FOR THE TREATMENT OF NEONATE AND INFANT RETINOBLASTOMA PATIENTS IN THE UNITED KINGDOM

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Background and aims: Retinoblastoma is the most common intra-ocular malignancy in children and frequently presents in very young patients who commonly require intravenous carboplatin. Delivering this is challenging due to a lack of uniform dosing recommendations, rapid changes in physiological function and the risk of side-effects, particularly ototoxicity. The United Kingdom utilizes a national Therapeutic Drug Monitoring (TDM) approach to carboplatin administration in these challenging patients, to ensure the achievement of target drug exposures. The current study was conducted to assess response and toxicity outcomes in our treated patients, to provide evidence towards guiding clinical practice.

Methods: We conducted a retrospective review of infants and children in the UK diagnosed with retinoblastoma, who have undergone adaptive carboplatin dosing based on a TDM approach over a 15 year period. We report on the pharmacokinetic, treatment efficacy and toxicity data.

Results: A total of 29 patients (median age 5 weeks at start of treatment) underwent a total of 74 TDM guided cycles of chemotherapy, involving real time sampling and dose adjustment. Without the adoption of a TDM approach to treatment, carboplatin exposures would have been \geq 20% outside the target AUC in 38/78 (49%) of treatment cycles. Excellent responses and a reassuringly low incidence of toxicities were observed following dose adjustment, despite the young patient age and implementation of dose increases in the majority of cases.

Conclusions: Real time TDM is safe, effective and deliverable for neonates and infants receiving carboplatin for retinoblastoma, and should be considered standard of care up to the age of 6 months. Where a TDM approach to treatment is not possible, recently published data support the use of carboplatin doses of 6 mg/ kg and 9mg/kg for targeting AUC values of 5.2 mg/mL.min and 7.8 mg/mL.min, respectively, in neonates and infants <10kg (Barnett et al, Br J Cancer 2023 129:1773-1779).





010 HOW THE COVID PANDEMIA HELPED TO START A RETINOBLASTOMA CENTER IN BUCHAREST

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Emergency Children's Hospital "Maria Sklodowska Curie"

Introduction: In Romania, until 2020, retinoblastoma was treated by systemic chemotherapy and enucleation. The consolidation and local treatment were performed in centers from the outside of the country, in France, Switzerland, Germany and Italy.

Methods and results: In March 2020, at the beginning of the Covid pandemia, the families could not longer travel outside the country and I started to examine children in our hospital and the images were sent to the colleagues from the retinoblastoma centers from Europe.

The chalenging started once the children developed relapses. I did transpupilary thermotherapy with a borrowed laser from another hospital and the first intravitreal injection with Topotecan at a mycroscope from neurosurgery department, with the online supervision of the medical teams from Jules-Gonin Hospital from Lausanne and Curie Institute from Paris.

Today, with the help of the Daruieste Viata Foundation, a non-governmental organization, we have an operating mycroscope, laser adapter, dyode laser and a cryode.

Between 2021 and 2023, we have 20 new cases and only 8 were referred abroad for treatment, 6 children were referred for local treatment, especially intraarterial chemotherapy (Lausanne, Paris and Budapest) and another 2 cases traveled abroad because the families chosed this.

Conclusions: I can not say that it is easy at all, but with enthusiam and help of the colleagues from Lausanne and Paris I can manage all the situations, for the best result for the children.

I think that in 2020 I was the right person in the right place and being supported by the teams from outside the country, I had the courage to start.





011 ADDITION OF INTRAVITREAL CARBOPLATIN WITH MELPHALAN FOR MANAGEMENT OF VITREOUS SEEDING IN RETINOBLASTOMA

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Purpose: To evaluate the efficacy and toxicity of intravitreal carboplatin plus melphalan for the treatment of vitreous seeds in eyes with retinoblastoma (RB).

Methods: This retrospective series at a tertiary referral center included 22 consecutive RB patients who had received intravitreal carboplatin (16 µg per 0.05 ml) combined with melphalan (30 µg in 0.03 ml) [IVi (Ca-Me)] for treatment of vitreous seeds. Tumor control and drug toxicities were recorded.

Results: There were 22 eyes of 22 patients, divided into primary group (n = 13) without history of previous intravitreal chemotherapy (IViC) and refractory group (n = 9) with history of previous IViC using melphalan and/or topotecan. The demographics and clinical findings of the primary and refractory groups did not differ significantly. The 6-month follow-up revealed complete vitreous seed control (77% vs. 89%, p = 0.47). Vitreous seed recurrence was detected in 1 eye of each group at 6 months. During the next 18-month follow-up period, no recurrence of seed was observed. The response to IVi (Ca-Me) was not significantly influenced by previous IViC (p = 0.70), primary systemic or intra-arterial chemotherapy (p = 0.45), or the type of regression (p = 0.35). The most common tumor treatment complications were retinal detachment (RD) (n = 2), early hypotony (n = 2) and late hypotony (n = 4, unrelated), cataract (n = 2), and severe pigment dispersion (n = 1). Enucleation was performed in 8 eyes, for total RD (n = 1), phthisis bulbi (n = 5), and extensive solid tumor recurrence (n = 2). There was no case of orbital invasion, systemic metastasis, or death.

Conclusion: Based on this interventional case series for primary and refractory vitreous RB seeds, carboplatin plus melphalan therapy may be effective with few toxic side effects.



Poster Presentations

THE



P01 A RARE PRESENTATION OF RETINAL VASCULITIS FOLLOWING INTRA-ARTERIAL CHEMOTHERAPY FOR UNILATERAL RETINOBLASTOMA Bouhout S., Hamel P.¹, Superstein R.¹

University of Montreal

Introduction: Retinoblastoma stands as the most prevalent intraocular tumor in childhood. The advent of intra-arterial chemotherapy has marked a significant advancement in its treatment paradigm. Despite its efficacy, it has been associated with local adverse events, although none have hitherto delineated retinal vasculitis as a sequela of treatment.

Aim: This case report is the first to document retinal vasculitis after intra-arterial chemotherapy.

Methods: A retrospective chart review of a single case was conducted.

Results: A 4.5-year-old boy, previously known with cutaneous mastocytosis, presented with left unilateral cT2b retinoblastoma (AJCC TNM classification). The tumor, measuring 9x8 mm, exhibited anterior localization without involvement of the ciliary body or retinal detachment, along with fine vitreous seeding. Initial visual acuity OS was 20/20. Intra-arterial chemotherapy (IAC) was administered employing multidrug therapy via balloon occlusion of the internal carotid artery with Melphalan 5mg/6ml (0.83mg/ml), carboplatin 30mg/6ml (5mg/ml), and Topotecan 1mg/6ml (0.17mg/ml). Two weeks post-initial treatment, posterior pole vascular tortuosity and cotton wool spots were observed. Fundus angiography revealed delayed arterial filling and the presence of sheathing around vessel walls, indicative of retinal vasculitis. Consequently, treatment modality was changed to systemic chemotherapy supplemented with local therapy. The patient underwent four cycles of systemic carboplatin, etoposide, and vincristine, in conjunction with cryotherapy and focal 810nm diode laser. Notably, no significant adverse effects of systemic chemotherapy were reported. Seven months post-diagnosis, the tumor diminished in size and became inactive with preserved visual acuity of 20/20.

Discussion: Prior research has documented various local complications associated with IAC, including arterial and venous occlusions, choroidal ischemia, macular ischemia, and ophthalmic artery occlusion. To our knowledge, retinal vasculitis has only been described in histopathological examinations of enucleated eyes post-IAC.

Conclusion: Retinal vasculitis should be recognized as a complication of intra-arterial chemotherapy employing multidrug therapy.





P02 THE PSYCHOSOCIAL SUPPORT PROVIDED BY THE RETINOBLSTOMA TEAM, BIRMINGHAM CHILDREN'S HOSPTIAL

Hughes E., Staveley S., Kainth A.

Birmingham Children's Hospital

Introduction: This poster will demonstrate the level of support provided by members of the Retinoblastoma team, Birmingham Children's Hospital. We will focus on the nursing team, (oncology nurse specialist and ocular nurse specialist) play specialist, clinical psychologist and family support worker from Childhood Eye Cancer Trust (CHECT). The aim is to show how the team engage with patients individually and how information is shared so patients are appropriately supported.

Method: Families can speak with the nursing team for advice, emotional support. They provide face to face support on clinical appointments, phone/text support in between visits. Each member of the nursing team has a skill set to help prepare, guide families through medical interventions like systemic chemotherapy, intra-arterial chemotherapy, enucleation preparation, theatre lists, awake examinations.

The play specialist will see each child on clinical visits, using play techniques to distract, prepare for theatre, awake examinations, artificial eye teaching.

Clinical psychologist provides one to one support for parents on a referral basis. Parents can opt in to verbal, video calls to explore thoughts, feeling relating to retinoblastoma diagnosis.

The family support worker from CHECT has face to face input with patient that has become a member of CHECT. They can provide emotional support and signposting to support services locally to the family, explore any grants that might be available to them.

Discussions: Staff attend psychosocial multidisciplinary meetings (MDT) to discuss the individual needs of patients, how we can work together to provide the best possible support. Staff contribute to providing emotional support to parents, guiding them to psychology if required.

Conclusion: This poster will visually represent each individual role within the retinoblastoma team and support they provide to patients, families.





P03 THE ROLE OF THE ONCOLOGY CLINICAL NURSE SPECIALIST WITHIN THE INTRA-ARTERIAL CHEMOTHERAPY PATHWAY Staveley S.

Birmingham Children's Hospital

Introduction: The aim of this poster is to explore and demonstrate the role the Retinoblastoma Oncology Clinical Nurse Specialist (CNS) provides within the intra-arterial chemotherapy (IAC) pathway delivered at Birmingham Childrens Hospital NHS Foundation Trust, and highlight the benefits to both the patient/families together with the retinoblastoma and wider oncology services.

Method/Discussion: With an average of 30 intra-arterial chemotherapy procedures carried out each year in 2022/2023 the co-ordination and organisation of IAC along with the supportive care provided to patients and their families has become a significant element of the Oncology CNS remit. The poster will highlight the support and education provided to patients receiving IAC and their families by being a source of advice, education and re-assurance prior to, during admission and following discharge. The planning and organisation of the procedure including the booking and co-ordination of IAC will be explored along with the benefit provided to the retinoblastoma service and family as a non-medical prescriber in the prescribing of the chemotherapy and post procedure medications. Specialist Nurse patient review and discharge highlights the value of the Oncology CNS within the IAC pathway, ensuring a safe and timely discharge benefitting both the family and the wider oncology service. The pre and post procedure care provided by the oncology inpatient nursing team is supported by the education of staff by the Retinoblastoma Oncology CNS thereby ensuring the patients receive appropriate post procedure care.

Conclusion: Demonstrating the role of the oncology specialist nurse within the IAC pathway has highlighted how the role has been developed to improve patient experience whilst enhancing the clinical pathway and reducing pressure on other elements of the retinoblastoma and wider oncology services.





P04 THE ROLE OF THE SPECIALIST NURSE WITHIN OCCULOPLASTICS

Kainth A.

Birmingham Children's Hopsital

Introduction/aims: This poster will highlight the role of the Surgical Nurse Specialist within the Retinoblastoma team at Birmingham Children's Hospital NHS Trust. This will include demonstrating the skill set to consent, prepare, and support patients and their families through RB diagnosis, enucleation and ongoing support of their artificial eye.

Method: Using statistics and patient examples to demonstrate the role within the occuloplastic clinic, how the experience of the RB nurse plays an integral role, working alongside the prosthetist to establish an individual treatment plan to best support the patient and family. Liase with families and allied health professionals to complete treatment of a good cosmetic outcome. Use nursing experience, signposting to other support services if required or co-ordinating artificial eye sessions jointly with a play specialist.

Discussions: As the Retinoblastoma nurse prepares the family for enucleation, there is already a level of rapport and trust that is built up, the RB nurse will endeavour to establish continuity of care to allow a holistic patient approach to support a positive outcome from medical interventions, building confidence within the individual so they feel comfortable enough to engage with the process. Knowledge of child development and age/stage of learning milestones are used to develop an individual pathway. Provide teaching techniques to help remove and replace the artificial eye independently and continuity of care. The relationship building that allows families to build trust and ensure engagement from both patient and family. The patient who will be discussed was extremely anxious of touching his artificial eye but is now confident to remove/replace it himself with some help from parents.

Conclusion: Patient feedback and case study will reflect on one of many success stories of how the role of the RB nurse provides a positive outcome to the ongoing management of the patient's artificial eye.





P05 ALTERNATED INTRAARTERIAL AND INTRAVITREAL CHEMOTHERAPY FOR ADVANCED RETINOBLASTOMA: REAL RISK OF INDUCED CATARACT? PATHOGENETIC HYPOTHESES AND SURGICAL MANAGEMENT

De Francesco S.¹, Marziali E.², Pasti M.², Caputo R.², Hadjistilianou D.¹

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Purpose: To report our experience in the management of cataracts following intraarterial and intravitreal chemotherapy in 6 young patients with advanced retinoblastoma.

Material and methods: This retrospective, single-Centre cohort study included patients diagnosed with retinoblastoma receiving cataract surgery for Chemotherapy-induced cataract.

Results: Six eyes of 3 patients (4 males and 2 female) were included. The age at surgery ranged between 3 and 13 years. Based on International Classification of Intraocular Retinoblastoma, tumors belonged to group D in 1 patient and E in 5 patients. All patients had undergone from 3 to 6 injections of intravitreal melphalan (20mcg), and 6 cycles of intraarterial melphalan (6mg) +topotecan (2 mg) + carboplatin (30mg). 1 out of 6 received 5 intravitreal injections of antiVEGF (Bevacizumab). Taking into consideration the type of cataract, 4 patients presented a white dense cataract, 1 complicated with posterior synechiae, while 1 patient had a posterior subcapsular cataract with a dense fibrotic anterior plaque. Timing ranges between 12 to 18 months after therapies. All patients underwent cataract surgery via clear corneal approach, primary posterior capsulotomy, anterior vitrectomy without intraocular lens implantation. No complications after cataract extracts urgery. In 1 out of six eyes we observed an intravitreal haemorragic suffusion which disappeared in 3 weeks. All reported cases underwent alternated intraarterial and intravitreal chemotherapy. Drugs and doses are similar in all cases.

Conclusions: In our cases, cataract surgery was a safe and effective procedure. It allowed us to monitor tumor control. Although surgery improves tumor visualization, visual prognosis may be limited by several factors such as macular involvement, amblyopia, secondary glaucoma, treatment side effects. The possible causes of the therapy-induced cataracts will be hypothesized.





P06 DEVELOPMENT OF A PARENT PEER SUPPORT TEA MEETING FOR PARENTS/ CARERS OF CHILDREN DIAGNOSED WITH RETINOBLASTOMA ATTENDING BIRMINGHAM CHILDREN'S HOSPITAL U.K.

McCalla M

Birmingham Women's and Children's NHS Foundation Trust

Introduction: This poster will highlight how the retinoblastoma support team took the opportunity to introduce a virtual peer support tea meeting for parents and carers of children diagnosed with Retinoblastoma at Birmingham children's hospital. The need was previously recognised but was highlighted during Covid 19, where natural conversations within the clinical setting with other families were restricted due to social distancing / isolation.

Method: During this period contact between families was limited and members of the retinoblastoma support team were able to identified common themes from their conversations with families. The rise of virtual meetings and appointments enabled the team to devise virtual sessions where parents/carers could opt in to a group with other families from the security of their homes. The sessions were facilitated by play specialist and lead retinoblastoma nurse specialist. Interested parties were sent an invitation and teabags with a request to take time out for this virtual meeting.

Discussion: Although all parents were invited to these sessions only mums attended the session. Session topics were agreed at the beginning by all. The session enabled everyone the time/space to talk with others who were sharing a similar cancer journey.

Results: Feedback from those who attended was that they felt comfortable to share their views and found it beneficial. The outcome of these session was to continue to provide additional peer support, signpost to local support services if indicated, refer to clinical psychology and to reinforce the emotional support provided by nursing team on clinical days. The interactions/ outcomes formed part of the psychosocial multi-disciplinary team meetings. One of the additional aims is to introduce a similar session for fathers/male carers using the same format.





P07 THE ROLE OF THE PLAY SPECIALIST WITHIN THE RETINOBLASTOMA TEAM AT BIRMINGHAM CHILDRENS HOSPITAL, UK

Hughes E

Birmingham Children's Hospital

Introduction: This poster will highlight the role of the play specialist within the retinoblastoma team. Demonstrating preparation, support provided to each child on their medical interventions, such as, general anaesthetics, nursing observations, eye drops, enucleation, awake examinations, artificial eye appointments. How the play specialist engages with parents and carers to establish the best support for the family, while working alongside the medical team to ensure information is shared to give a holistic approach to the patient's treatment plan.

Method: Using images, examples of the different techniques used within the role to explain how play enhances the patient journey and aids understanding for both patient and their family. Producing information aimed at the child's age and stage of learning to prepare them for upcoming medical interventions. Demonstrating emotional support provided for parents, encouraging them to engage in peer support virtual group. Highlighting play input within the artificial eye clinic and how this builds confidence, promotes independence and enhances the patient experience. Giving patients a safe space to explore their diagnosis/condition while supported by their peers.

Discussions: Explore the skill set of the play specialist and how play can be used to reduce anxiety around hospital interventions, providing education around their condition. Preparing children ahead of interventions to aid co-operation during examination. Understanding child development and how a retinoblastoma diagnosis can affect the child's learning milestones. Acknowledging the importance of emotional support for both patients and their families and how the play specialist can contribute to the psychosocial multi-disciplinary team meeting (MDT).

Conclusion: Demonstrate positive impact play has for patients, families and wider retinoblastoma team by sharing good practice. Supporting children in this way encourages co-operation, improves understanding and enhances acceptance of their condition.





P08 RETINOBLASTOMA AND AUTISM SPECTRUM DISORDER: IS THERE ANY CORRELATION?

<u>Galimberti D.</u>¹, Caini M.¹, Campisano M.¹, De Francesco S.², Hadjistilianou T.², Bracco S.³, Galluzzi P.³

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Introduction: Retinoblastoma arises from mutations in both RB1 tumor suppressor gene alleles on chromosome 13q14, disrupting cell cycle control. Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by social and communication deficits, repetitive behaviors and restricted interests. ASD include an abnormal synapse formation, overexpression of glial cells, neuroinflammation, mitochondrial dysfunction, neuroexcitation and oxidative stress.

Aim: We have observed babies that develop during the treatment, neurological impairment or autistic behavior out of 13q-deletion-syndrome.

Case Report: A boy with diagnosis of Retinoblastoma at 6 months showed a neurodevelopmental disorder congruent with ASD diagnosis at 24 months. Genetic analysis showed RB1 de novo mutation associated with ZMYND11 and KDM6B mutations which are known to be potentially implicated in the pathogenesis of neurodevelopment disorders and ASD. KDM6B is hyston demetilase that plays a role as both a tumor soppressor and an oncogene, depending on the cellular context interacting with RAS and RB1 pathway.

Discussion: Molecular studies demonstrated that RB1-mutations may account for an overexpression of mTOR complex (second messenger of RAS signaling). The mTOR pathway is frequently altered in human tumors, playing a key role in tumor proliferation, angiogenesis, invasion and survival. mTOR cascade appears to be involve also in neurodevelopmental disorders, and autism spectrum disorders (ADS). In particular the P13K-AKT/mTOR signaling pathway, is involved in various neuronal functions, mainly affects synaptogenesis, corticogenesis and related neuronal brain processes. An increase in mTOR activation can negatively impact on dendritic spines development with dysregulation of cortical circuits involved in higher cognitive functions and autistic phenotype.

Conclusions: It is possible to hypothesize a relation between Retinoblastoma mutated and ASD but our data are still insufficient. Sharing cases between Retinoblastoma centers could be important for sharing information and understanding the real correlation between these disorders.





P09 STRABISMUS MANAGEMENT IN RETINOBLASTOMA SURVIVORS

Masoomian B.¹, L. Shields C.², Ghassemi F.¹, Riazi-Esfehani H.¹

¹Farabi Eye Hospital, ²Wills Eye Hospital

Purpose: To report the result of strabismus surgery in eye-salvaged retinoblastoma (Rb) patients. **Methods:** A retrospective case series including 18 patients with Rb and strabismus who underwent strabismus surgery after completing tumor treatment by a single pediatric ophthalmologist.

Results: A total of 18 patients (10 females and 8 males) were included with a mean age of 13.3 \pm 3.0 (range, 2-39) months at the time of tumor presentation and 6.0 \pm 1.5 (range, 4-9) years at the time of strabismus surgery. Ten (56%) patients had unilateral and 8(44%) had bilateral involvement and the most common worse eye tumor group was D (n=11), C (n=4), B (n=2), and E (n=1). Macula was involved in the tumors in 12 (67%) patients. The tumors were managed by intravenous chemotherapy (n=8, 47%), intra-arterial chemotherapy (n=7, 41%), and both (n=3, 17%). After complete treatment, the average time to strabismus surgery was 29.9 \pm 20.5 (range, 12-84) months. Except for one, visual acuity was equal to or less than 1.0 logMAR (\leq 20/200) in the affected eye. Seven (39%) patients had exotropia, 11(61%) had esotropia (P=0.346), and vertical deviation was found in 8 (48%) cases. The angle of deviation was 42.0 \pm 10.4 (range, 30-60) prism diopter (PD) for esotropic and 35.7 \pm 7.9 (range, 25-50) PD for exotropic patients (P=0.32) that after surgery significantly decreased to 8.5 \pm 5.3 PD in esotropic cases and 5.9 \pm 6.7 PD in exotropic cases (P<0.001). The mean follow-up after surgery was 15.2 \pm 2.0 (range, 10-24) months, in which, 3 (17%) patients needed a second surgery.

Conclusion: Strabismus surgery in treated Rb is safe and the results of the surgeries are acceptable and close to the general population. There was not association with tumor recurrence or metastasis.





P10 EYE AND EAR: COMMON GENES? A CASE OF BILATERAL RETINOBLASTOMA AND COMMON CAVITY DEFORMITY

Galluzzi P., Rubegni G., <u>Mensi L.</u>, Marini D., S. De Francesco, Hadjistilianou D. University of Siena

Introduction: The mutation of RB1 is associated with Retinoblastoma; however, the same gene is implicated in the differentiation of inner ear hair cells. The purpose of this study is to evaluate the association between retinoblastoma and inner ear malformations. We herein report a case of bilateral retinoblastoma and common cavity.

Methods: Case report.

Results: A 15-month-old child presented with proptosis, corneal edema and distinctive facial traits. We performed a comprehensive ophthalmologic examination under general anaesthesia using portable slit lamp, fundus camera (PanoCam[™]) and ocular B-scan ultrasound. Right eye showed a cavitary retinoblastoma complicated with total haemorrhagic retinal detachment and IOP of 29 mmHg, it was classified as Group E and thus enucleated. A small focus retinoblastoma was found in the Left eye (Group A), which was treated with laser- and cryotherapy. A routine MRI revealed bilateral inner ear malformation. Therefore, a neuroradiological and an ORL consultation were conducted. A temporal bone HRTC demonstrated the presence of a common cavity deformity. Genetic testing including cytogenetics was also requested.

Conclusion: The association between Retinoblastoma and Inner Ear Malformations is rare, and so far it has only been described within the spectrum of phenotypic manifestations of Chromosome 13q Deletion Syndrome. One hypothesis considers the role of RB family proteins expressed in cochlear and vestibular hair cells during differentiation stages, for instance RB1 inactivation leads to apoptosis and aberrant proliferation of hair cells. Another hypothesis involves the deletion of contiguous genes on Chromosome 13. The presence of bilateral retinoblastoma alongside the patient's characteristic facial features suggests the possibility of a 13q deletion syndrome; however, genetic analyses in our case are still ongoing. Additionally, in the presence of bilateral retinoblastoma, associated inner ear malformations must be excluded.





Α

Al Hammadi M.....004 Al-Ghazzawi K008

В

| Barnett S | 009 |
|-------------|----------|
| Barwinski N | 002 |
| Bechrakis N | 002, 008 |
| Biewald E | 008 |
| Bouhout S | P1 |
| Bracco S | 007, P8 |

С

| 007, P8 |
|---------|
| 007, P8 |
| P5 |
| 006 |
| 006 |
| 007 |
| 007 |
| 006 |
| |

D

| De Francesco S | 007, P5, P8 |
|-----------------|-------------|
| De Pasquale M | 006 |
| De Vito R | 006 |
| Del Baldo G | 006 |
| D'Elia G | 006 |
| Di Giannatale A | 006 |
| Di Nicola M | 001 |
| Di Ruscio V | 006 |
| Dimaras H | 004 |
| Duncan C | 009 |

F

| -iorentzis M | 002 |
|-----------------|-----|
| =legg K | 004 |
| Francesco S. De | P10 |

G

| Galimberti D | 007, P8 |
|--------------|--------------|
| Galluzzi P | 007, P8, P10 |
| Gennari P | 007 |
| Ghassemi F | 011, P9 |
| Gunduz A | 003 |
| | |

Н

| Hadjistilianou D | .007, P5, P8, P10 |
|------------------|-------------------|
| Hamel P | .P1 |
| Hughes E | .P2, P7 |

J

Jabbarli L.....002, 008

Κ

| Kainth A | P2, P4 |
|------------|--------|
| Ketteler P | |
| Kiefer T | |
| Kim Y | 005 |

L

| L. Shields C | 011, P9 |
|--------------|---------|
| Lawford A | |
| Le Guin C | 002 |
| Lohmann D | 002 |
| Longo D | |





Μ

| Marini D | 007, P10 |
|---------------|----------|
| Marziali E | P5 |
| Masoomian B | 011, P9 |
| Mastronuzzi A | |
| Mccalla M | P6 |
| Mensi L | P10 |
| Milano G | |
| Millen G | 009 |
| Monti L | 007 |

| Staveley S | P3 |
|--------------|----|
| Superstein R | P1 |

V _____

| Valente P | |
|-----------|-----|
| Vallone I | 007 |
| Veal G | 009 |

Y

Yesiltas Y.....003

Ζ

| Zeschnigl | ≺М | 002 |
|-----------|----|-----|
| Zouridaki | E | 004 |

N

| Natali G | .006 |
|-------------|------|
| Negretti G | .005 |
| Nitulescu E | .010 |
| Noronha R | .004 |

Ρ

Pasti M.....P5

R

| Reddy M | 005 |
|------------------|---------|
| Riazi-Esfehani H | 011, P9 |
| Ristevski I | 004 |
| Romanzo A | 006 |
| Rubegni G. | P10 |
| Russo I | 006 |

S

| Sagoo M | 005 |
|-------------|-----|
| Staveley S | P2 |
| Sugamiele F | 007 |



General Information

Date & venue

May 30th - 1st June, 2024 Divani Caravel Hotel, Athens, Greece (2 Vassileos Alexandrou ave., 16121 Athens - Greece, Tel.: +30 210 7207000, website: https://divanicaravelhotel.com/)

Congress website https://www.ooseurbgathens2024.com/

Official language

English will be the official language of the meeting.

Certificate of attendance

The congress has been accredited with 24 EACCMEs points. Each participant will be provided with a certificate of attendance only if he/she has attended the 60% of the scientific program of the congress. Certificates will be provided after the completion of the electronic evaluation form which will be sent to all the participants after the end of the Meeting.

Congress badge

It is mandatory for the delegates to show their meeting's badge at the entrance of the meeting hall.

Meeting's hall presentations

Available audiovisual equipment for all presentations will be through power point presentation. Presentations must be delivered to the technical secretariat at least 45 minutes before the beginning of the session. The use of personal computers will not be feasible.

Exhibition

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