

**UNIVERSITÀ DEGLI STUDI DI MILANO**

Procedura di selezione per la chiamata a professore di I fascia da ricoprire ai sensi dell'art. 18, comma 1, della Legge n. 240/2010 per il settore concorsuale 06/D3 - Malattie del Sangue, Oncologia e Reumatologia, (settore scientifico-disciplinare MED/15 - Malattie del Sangue) presso il Dipartimento di Dipartimento di Oncologia ed Emato-Oncologia, (avviso bando pubblicato sulla G.U. n. 59 del 26/07/2022) - Codice concorso 5010

## **Luca Malcovati**

### **CURRICULUM VITAE**

**INFORMAZIONI PERSONALI**

|                 |            |
|-----------------|------------|
| COGNOME         | MALCOVATI  |
| NOME            | LUCA       |
| DATA DI NASCITA | 16/05/1972 |

**TITOLI****TITOLO DI STUDIO**

- 1990 - Maturità scientifica presso il Liceo Scientifico «N. Copernico» di Pavia con il punteggio di 60/60  
- 07/1996 - Laurea in Medicina e Chirurgia presso l'Università degli Studi di Pavia, votazione di 110/110 e lode (*Tesi dal titolo «La FISH con sonde specifiche per i cromosomi del sesso per dimostrare l'attecchimento, il chimerismo e l'origine della recidiva nei trapianti allogenici di midollo osseo da donatore di sesso diverso: studio di 41 pazienti», Relatore Prof. C. Bernasconi*)

**TITOLO DI DOTTORE DI RICERCA O EQUIVALENTI, OVVERO, PER I SETTORI INTERESSATI, DEL DIPLOMA DI SPECIALIZZAZIONE MEDICA O EQUIVALENTE, CONSEGUITO IN ITALIA O ALL'ESTERO**

- 10/2000 - Diploma di Specializzazione in Ematologia l'Università degli Studi di Pavia, votazione di 50/50 e lode (*Tesi dal titolo «La riduzione dell'intensità del regime di condizionamento al trapianto allogenico di cellule staminali periferiche: presupposti sperimentali e implicazioni cliniche»*).

**ALTRI TITOLI CONSEGUITI**

- Conseguimento dell'abilitazione all'esercizio professionale nella prima sessione 1997 (maggio 1997).  
- 12/2000 - 10/2001: Servizio Civile presso il Policlinico San Matteo di Pavia, avendo come piano d'impiego il "supporto alle attività socio-assistenziali svolte dal personale ospedaliero e collaborazione ai programmi di accoglienza e di supporto logistico predisposti dall'ospedale".  
- 10/2001 - 1° posto della graduatoria per il conferimento di una borsa di studio di PAVIAIL (Sezione autonoma di Pavia dell'Associazione Italiana contro le Leucemie) «Barbara De Vecchi e Teresa Pellino Scagliotti», presentando il progetto di ricerca "Induzione in vitro di linfociti T citotossici sensibilizzati verso cellule mielodisplastiche come immunoterapia cellulare nei pazienti affetti da mielodisplasia e sottoposti a trapianto allogenico di cellule staminali emopoietiche con condizionamento non-mieloablativo".  
- 12/ 2001 - 1° posto della graduatoria per il conferimento di una borsa di studio dell'IRCCS Policlinico San Matteo di Pavia per collaborare allo svolgimento del progetto di ricerca "Procedure diagnostiche e terapie trapiantologiche innovative per le sindromi mielodisplastiche".  
- 01/07/2002 - 30/06/2006: titolare di assegno di ricerca dell'Università degli Studi di Pavia sul progetto "Procedure trapiantologiche innovative nelle sindromi mielodisplastiche", svolto presso la Sezione di Ematologia del Dipartimento di Scienze Ematologiche, Pneumologiche e Cardiovascolari Mediche e Chirurgiche dell'Università di Pavia.  
- 2006: visiting researcher presso Division of Hematology, Department of Medicine, Karolinska Institutet & Karolinska University Hospital, Stockholm, Sweden.  
- 01/09/2006 - 31/10/2014: ricercatore universitario presso la Facoltà di Medicina e Chirurgia dell'Università degli Studi di Pavia, settore scientifico disciplinare MED/15 - Malattie del Sangue.

- Dal 01/11/2014 : **Professore Associato di Ematologia presso Dipartimento di Medicina Molecolare dell'Università degli Studi di Pavia**, settore scientifico disciplinare MED/15 - Malattie del Sangue.  
- Marzo 2017: **abilitazione a Professore di I Fascia** per il settore concorsuale MALATTIE DEL SANGUE, ONCOLOGIA E REUMATOLOGIA.

## **ATTIVITÀ DIDATTICA**

### **INSEGNAMENTI E MODULI**

#### ***Corsi di Laurea***

##### ***Corso di Laurea in Medicina e Chirurgia in lingua italiana***

Dall'anno accademico 2001-02 all'anno accademico 2005-2006 ha partecipato all'attività didattica del Corso Integrato di Malattie del Sangue e degli Organi Emopoietici del Corso di Laurea in Medicina e Chirurgia, Facoltà di Medicina e Chirurgia, Università degli Studi di Pavia (ordinamenti Tabella XVIII ter e ordinamento Laurea Specialisitica 46/S), in qualità di cultore della materia e tutore nell'ambito dell'attività di Tirocinio Professionalizzante.

Dall'anno accademico 2006-07 è stato Professore Aggregato al Corso di Laurea in Medicina e Chirurgia (ordinamento Laurea Specialisitica 46/S e Laurea Magistrale Ciclo Unico), ricevendo l'affidamento dei seguenti insegnamenti:

- nell'anno accademico 2006-2007: Insegnamento di Ematologia 4, Corso Integrato di Malattie del Sangue e degli Organi Emopoietici (Laurea Specialisitica Ciclo Unico);
- dall'anno accademico 2007-2008 all'anno accademico 2009-2010: Insegnamento di Applicazioni Teorico-Pratiche Malattie del Sangue 2, Corso Integrato di Malattie del Sangue e degli Organi Emopoietici (Laurea Specialisitica Ciclo Unico);
- nell'anno accademico 2010-2011: Insegnamento di Applicazioni Teorico-Pratiche Malattie del Sangue, Corso Integrato di Malattie del Sangue e degli Organi Emopoietici (Laurea Magistrale Ciclo Unico);
- dall'anno accademico 2011-2012 all'anno accademico 2013-2014: Insegnamento di Malattie del Sangue - Modulo Ematologia (Laurea Magistrale Ciclo Unico - Corso di Laurea in lingua italiana).

Dall'anno accademico 2014-2015 è titolare del Insegnamento di Malattie del Sangue - Modulo Ematologia, Laurea Magistrale Ciclo Unico, Corso di Laurea in lingua italiana.

Dall'anno accademico 2017-2018 è coordinatore del Corso Integrato di Malattie del Sangue e degli Organi Emopoietici, Laurea Magistrale Ciclo Unico, Corso di Laurea in lingua italiana.

##### ***Corso di Laurea in Medicina e Chirurgia in lingua inglese***

Dall'anno accademico 2011-2012 all'anno 2013-2014 ha ricevuto l'affidamento dell'Insegnamento di Blood Diseases - Modulo Hematology, Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia in lingua inglese.

Dall'anno accademico 2014-2015 è titolare dell'Insegnamento di Blood Diseases - Modulo Hematology, Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia in lingua inglese.

Dall'anno accademico 2014-2015 è titolare dell'Insegnamento di Precision Medicine, Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia in lingua inglese.

Dall'anno accademico 2017-2018 è coordinatore del Corso di Blood Diseases, Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia in lingua inglese.

#### ***Scuole di Specializzazione***

Dall'anno accademico 2011-12 al 2014-15 è stato, e dall'anno accademico 2017-2018 è membro del Comitato Ordinatore della Scuola di Specializzazione in Ematologia dell'Università degli Studi di Pavia.

Dall'anno accademico 2006-07 è titolare dell'insegnamento Sindromi Mielodisplastiche e dall'anno accademico 2010-11 dell'insegnamento Neoplasie Mieloidi della Scuola di Specializzazione in Ematologia dell'Università degli Studi di Pavia.

Dall'anno accademico 2015-16 è titolare dell'insegnamento di Malattie del Sangue della Scuola di Specializzazione in Radiodiagnostica dell'Università degli Studi di Pavia.

Dall'anno accademico 2016-17 è titolare dell'insegnamento di Malattie del Sangue della Scuola di Specializzazione in Patologia Clinica e Biochimica Clinica dell'Università degli Studi di Pavia.

Dall'anno accademico 2016-17 al 2018-2019 è stato titolare dell'insegnamento di Malattie del Sangue della Scuola di Specializzazione in Psichiatria dell'Università degli Studi di Pavia.

Dall'anno accademico 2016-17 al 2018-2019 è stato titolare dell'insegnamento di Malattie del Sangue della Scuola di Specializzazione in Neurologia dell'Università degli Studi di Pavia.

### ***Dottorati di Ricerca***

Dall'anno accademico 2016-2017 è membro del Collegio dei Docenti del Dottorato di Ricerca in Scienze Biomediche, Università degli Studi di Pavia.

## **ATTIVITÀ DI DIDATTICA INTEGRATIVA E DI SERVIZIO AGLI STUDENTI**

### **ATTIVITÀ DI RELATORE DI ELABORATI DI LAUREA, DI TESI DI LAUREA MAGISTRALE E DI TESI DI DOTTORATO**

È stato Relatore delle seguenti Tesi Sperimentali di Laurea in Medicina e Chirurgia:

- Anno accademico 2014-15 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Meccanismo di cancerogenesi e implicazioni cliniche delle mutazioni di fattori di splicing nelle neoplasie mieloidi con mielodisplasia.
- Anno Accademico 2015-2016 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia in lingua inglese. Clinical and molecular features of SRSF2-mutant myeloid neoplasms.
- Anno Accademico 2016-2017 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Frequenza e impatto prognostico di mutazioni somatiche in 74 pazienti affetti da leucemia mieloide cronica.
- Anno Accademico 2016-2017 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Leucemia mieloide acuta a rischio citogenetico-molecolare intermedio: casistica monocentrica di 143 pazienti.
- Anno Accademico 2016-2017 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Caratterizzazione clinico-patologica e molecolare delle sindromi mielodisplastiche ipoplastiche.
- Anno Accademico 2017-2018 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Automated phylogenomic tree reconstruction from whole genome sequencing allows the study of subclonal architecture in hematological malignancies: the paradigm of multiple myeloma.
- Anno Accademico 2018-2019 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Clinical and molecular features of SRSF2-mutated neoplasms.
- Anno Accademico 2018-2019 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Next-Generation Sequencing for the Identification of Myeloid Neoplasms with Germline Predisposition.
- Anno Accademico 2019-2020 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Spectrum of germline mutations in adults with myeloid neoplasm.
- Anno Accademico 2019-2020 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Co-mutation patterns, clonal hierarchy and clone size in SRSF2 P95-mutated myeloid neoplasms.
- Anno Accademico 2020-2021 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Prevalenza e significato clinico delle mutazioni del gene DDX41 nei pazienti con sospetta neoplasia mieloide.
- Anno Accademico 2021-2022 - Laurea Magistrale Ciclo Unico, Corso di Laurea in Medicina e Chirurgia. Citopenia clonale di significato indeterminato (CCUS): caratteristiche cliniche e profili molecolari.

## **ATTIVITÀ DI RICERCA SCIENTIFICA**

### **PUBBLICAZIONI SCIENTIFICHE**

L'attività di ricerca svolta ha portato complessivamente alla pubblicazione di 202 lavori su riviste recensite, di cui 60 come primo o ultimo autore (identificativo ORCID <http://orcid.org/0000-0002-1460-1611>). Dodici di questi articoli sono stati classificati come highly cited papers in the field secondo Web Of Science (i.e. articoli che si collocano nel primo percentile del settore scientifico per numero di citazioni). Il Prof. Luca Malcovati è inoltre autore o coautore di 20 pubblicazioni a carattere educativo e didattico.

Le pubblicazioni su riviste recensite sono contraddistinte dai seguenti parametri bibliometrici (aggiornati al mese di agosto 2022):

- Impact Factor totale: 33312.19
- Active Impact Factor (IF totale delle pubblicazioni come primo o ultimo autore): 1057.42
- H-index: Google Scholar=74, Scopus=63, Web of Science=61.
- N. di citazioni totali: Google Scholar= 26.972, Scopus= 19.043, Web of Science= 17.279.

#### ***Pubblicazioni su riviste recensite***

1. Duncavage EJ, Bagg A, Hasserjian RP, DiNardo C, Godley LA, Iacobucci I, Jaiswal S, Malcovati L, Vannucchi AM, Patel K, Arber DA, Arcila ME, Bejar B, Berliner N, Borowitz M, Branford S, Brown A, Cargo

- CA, Döhner H, Falini B, GarciaManero G, Haferlach T, Hellstrom-Lindberg E, Kim A, Klco, Komrokji R, Loh NLC, Loghavi S, Mullighan CG, Ogawa S, Orazi A, Papaemmanuil E, Reiter , Ross DM, Savona M, Shimamura A, Skoda RC, Solé F, Stone RM, Tefferi A, Walter MJ, Wu D, Ebert BL, Cazzola M. Genomic Profiling for Clinical Decision Making in Myeloid Neoplasms and Acute Leukemias. *Blood* 2022.
2. Bernard E, Tuechler H, Greenberg PL, Hasserjian HP, Arango Ossa JE, Nannya Y, Devlin SM, Creignou M, Pinel P, Monnier L, Gundem G, Medina-Martinez JS, Domenico D, Jädersten M, Germing U, Sanz G, van de Loosdrecht AA, Kosmider O, Follo MY, Thol F, Zamora L, Pinheiro RF, Pellagatti A, Elias HK, Haase D, Ganster C, Ades L, Tobiasson M, Palomo L, Della Porta MG, Takaori-Kondo A, Ishikawa T, Chiba S, Kasahara S, Miyazaki Y, Viale A, Huberman K, Fenaux P, Belickova M, Savona MR, Klimek VM, Santos FPS, Boulwood J, Kotsianidis I, Santini V, Solé F, Platzbecker U, Heuser M, Valent P, Ohyashiki K, Finelli C, Voso MT, Shih LY, Fontenay M, Jansen JH, Cervera J, Gattermann N, Ebert BL, Bejar R, **Malcovati L**, Cazzola M, Ogawa S, Hellström-Lindberg E, Papaemmanuil E. Molecular International Prognostic Scoring System for Myelodysplastic Syndromes. *NEJM Evid* 2022; 1 (7). DOI:https://doi.org/10.1056/EVIDoa2200008
3. Vanni D, Borsani O, Nannya Y, Sant'Antonio E, Trotti C, Casetti IC, Pietra D, Galli A, Zibellini S, Ferretti VV, **Malcovati L**, Ogawa S, Arcaini L, Rumi E. Haematological malignancies in relatives of patients affected with myeloproliferative neoplasms. *EJHaem*. 2022 Mar 24;3(2):475-479.
4. DA, Orazi A, Hasserjian RP, Borowitz MJ, Calvo KR, Kvasnicka HM, Wang SA, Bagg A, Barbui T, Branford S, Bueso-Ramos CE, Cortes J, Dal Cin P, DiNardo CD, Dombret H, Duncavage EJ, Ebert BL, Estey E, Facchetti F, Foucar K, Gangat N, Gianelli U, Godley LA, Goekbuget N, Gotlib JR, Hellström-Lindberg E, Hobbs G, Hoffman R, Jabbour EJ, Kiladjian JJ, Larson RA, Le Beau MM, Loh ML, Löwenberg B, Macintyre EA, **Malcovati L**, Mullighan CG, Niemeyer CM, Odenike O, Ogawa S, Orfao A, Papaemmanuil E, Passamonti F, Porkka K, Pui CH, Radich JP, Reiter A, Rozman M, Rudelius M, Savona MR, Schiffer C, Schmitt-Graeff A, Shimamura A, Sierra J, Stock W, Stone RM, Tallman MS, Thiele J, Tien HF, Tzankov A, Vannucchi AM, Vyas P, Wei AH, Weinberg OK, Wierzbowska A, Cazzola M, Döhner H, Tefferi A. International Consensus Classification of Myeloid Neoplasms and Acute Leukemia: Integrating Morphological, Clinical, and Genomic Data. *Blood*. 2022 Jun 29;blood.2022015850. doi: 10.1182/blood.2022015850. Epub ahead of print.
5. van Zeventer IA, de Graaf AO, Koorenhof-Scheele TN, van der Reijden BA, van der Klauw MM, Dinmohamed AG, Diepstra A, Schuringa JJ, **Malcovati L**, Huls G, Jansen JH. Monocytosis and its association with clonal hematopoiesis in community-dwelling individuals. *Blood Adv*. 2022 May 13;bloodadvances.2021006755. doi: 10.1182/bloodadvances.2021006755. Epub ahead of print.
6. Ye J, Calvo IA, Cenozo I, Vilas A, Martinez-de-Morentin X, Lasaga M, Alignani D, Paiva B, Viñado AC, San Martin-Uriz P, Romero JP, Quilez Agreda D, Miñana Barrios M, Sancho-González I, Todisco G, **Malcovati L**, Planell N, Saez B, Tegner JN, Prosper F, Gomez-Cabrero D. Deconvolution of the hematopoietic stem cell microenvironment reveals a high degree of specialization and conservation. *iScience*. 2022 Apr 8;25(5):104225.
7. Guzzi N, Muthukumar S, Cieśła M, Todisco G, Ngoc PCT, Madej M, Munita R, Fazio S, Ekström S, Mortera-Blanco T, Jansson M, Nannya Y, Cazzola M, Ogawa S, **Malcovati L**, Hellström-Lindberg E, Dimitriou M, Bellodi C. Pseudouridine-modified tRNA fragments repress aberrant protein synthesis and predict leukaemic progression in myelodysplastic syndrome. *Nat Cell Biol*. 2022 Mar;24(3):299-306. doi: 10.1038/s41556-022-00852-9.
8. Borsani O, Bastard P, Rosain J, Gervais A, Sant'Antonio E, Vanni D, Casetti IC, Pietra D, Trotti C, Catricalà S, Ferretti VV, **Malcovati L**, Arcaini L, Casanova JL, Borghesi A, Rumi E. Autoantibodies against type I IFNs in patients with Ph-negative myeloproliferative neoplasms. *Blood*. 2022 Apr 28;139(17):2716-2720.
9. Asimomitis G, Deslauriers AG, Kotini AG, Bernard E, Esposito D, Olszewska M, Spyrou N, Arango Ossa JE, Mortera-Blanco T, Koche RP, Nannya Y, **Malcovati L**, Ogawa S, Cazzola M, Aaronson SA, Hellström-Lindberg E, Papaemmanuil E, Papapetrou EP. Patient-specific MDS-RS iPSCs define the mis-spliced transcript repertoire and chromatin landscape of SF3B1-mutant HSPCs. *Blood Adv*. 2022 May 24;6(10):2992-3005.
10. Spinello A, Borisek J, **Malcovati L**, Magistrato A. Investigating the molecular mechanism of H3B-8800: a splicing modulator inducing preferential lethality in spliceosome-mutant cancers. *Int J Mol Sci*. 2021 Oct 18;22(20):11222.
11. Radakovich N, Meggendorfer M, **Malcovati L**, Hilton CB, Sekeres MA, Shreve J, Rouphail Y, Walter W, Hutter S, Galli A, Pozzi S, Elena C, Padron E, Savona MR, Gerds AT, Mukherjee S, Nagata Y, Komrokji RS, Jha BK, Haferlach C, Maciejewski JP, Haferlach T, Nazha A. A Geno-Clinical Decision Model for the Diagnosis of Myelodysplastic Syndromes. *Blood Adv*. 2021 Nov 9;5(21):4361-4369.
12. **Malcovati L**. The journey of a thousand miles begins with one step. *Blood*. 2021 Sep 9;138(10):824-826.
13. Döhner H, **Malcovati L**, Ossenkoppele GJ, Hochhaus A, Maria Vannucchi A, Bullinger L, Cervantes F, Craddock C, de Witte T, Döhner K, Dombret H, Fenaux P, Geissler J, Germing U, Guilhot F, Harrison

- C, Hellström-Lindberg E, Passamonti F, Sierra J, Skoda R, Wierzbowska A. The EHA Research Roadmap: Malignant Myeloid Diseases. *Hemasphere*. 2021 Aug 26;5(9):e635.
14. Zanotti R, Bonifacio M, Lucchini G, Sperr WR, Scaffidi L, van Anrooij B, Oude Elberink HN, Rossignol J, Hermine O, Gorska A, Lange M, Hadzijusufovic E, Miething C, Müller S, Perkins C, Shomali W, Elena C, Illerhaus A, Jawhar M, Parente R, Caroppo F, Solomianyi O, Zink A, Mattsson M, Yavuz AS, Panse J, Varkonyi J, Doubek M, Sabato V, Breynaert C, Vucinic V, Schug T, Häggglund H, Wortmann F, Brockow K, Angelova-Fischer I, Belloni Fortina A, Triggiani M, Reiter A, Hartmann K, **Malcovati L**, Gotlib J, Shoumariyeh K, Niedoszytko M, Arock M, Kluin-Nelemans HC, Bonadonna P, Valent P. Refined diagnostic criteria for bone marrow mastocytosis: a proposal of the European competence network on mastocytosis. *Leukemia*. 2021 Sep 20. doi: 10.1038/s41375-021-01406-y. Online ahead of print.
  15. Elena C, Galli A, Bono E, Todisco G, **Malcovati L**. Clonal hematopoiesis and myeloid malignancies: clonal dynamics and clinical implications. *Curr Opin Hematol*. 2021 Sep 1;28(5):347-355.
  16. Oster HS, Crouch S, Smith A, Yu G, Abu Shrike B, Baruch S, Kolomansky A, Ben-Ezra J, Naor S, Fenaux P, Symeonidis A, Stauder R, Cermak J, Sanz G, Hellström-Lindberg E, **Malcovati L**, Langemeijer S, Germing U, Holm MS, Madry K, Guerci-Bresler A, Culligan D, Sanhes L, Mills J, Kotsianidis I, van Marrewijk C, Bowen D, de Witte T, Mittelman M. A predictive algorithm using clinical and laboratory parameters may assist in ruling out and in diagnosing MDS. *Blood Adv*. 2021 Aug 24;5(16):3066-3075.
  17. Homan CC, King-Smith SL, Lawrence DM, Arts P, Feng J, Andrews J, Armstrong M, Ha T, Dobbins J, Drazer MW, Yu K, Bödör C, Cantor A, Cazzola M, Degelman E, DiNardo CD, Duployez N, Favier R, Fröhling S, Fitzgibbon J, Klco JM, Krämer A, Kurokawa M, Lee J, **Malcovati L**, Morgan NV, Natsoulis G, Owen C, Patel KP, Preudhomme C, Raslova H, Rienhoff H, Ripberger T, Schulte R, Tawana K, Velloso E, Yan B, Liu P, Godley LA, Schreiber AW, Hahn CN, Scott HS, Brown AL. On behalf of the RUNX1 international data-sharing consortium. The RUNX1 Database (RUNX1db): Establishment of an expert curated RUNX1 registry and genomics database as a public resource for familial platelet disorder with myeloid malignancy. *Haematologica* 2021 Jul 8. doi: 10.3324/haematol.2021.278762. Online ahead of print.
  18. Galli A, Todisco G, Catamo E, Sala C, Elena C, Pozzi S, Bono E, Ferretti VV, Rizzo E, Molteni E, Zibellini S, Sarchi M, Boveri E, Ferrari J, Fiorelli N, Camaschella C, Gasparini P, Toniolo D, Cazzola M, **Malcovati L**. Relationship between clone metrics and clinical outcome in clonal cytopenia. *Blood*. 2021 Sep 16;138(11):965-976.
  19. Tsaknakis G, Galli A, Papadakis S, Kanellou P, Elena C, Todisco G, Bono E, Rizzo E, Molteni E, Fragiadaki I, Mavroudi I, Pontikoglou C, Batas A, Maxouri S, Linardaki E, Tavernarakis N, **Malcovati L**,\* Papadaki HA\*. Incidence and Prognosis of Clonal Hematopoiesis in patients with Chronic Idiopathic Neutropenia. *Blood*. 2021 Oct 7;138(14):1249-1257. \*Last co-authorship
  20. van Zeventer IA, de Graaf AO, van der Klauw MM, Vellenga E, van der Reijden BA, Schuringa JJ, Diepstra A, **Malcovati L**, Jansen JH, Huls G. Peripheral blood cytopenias in the ageing general population and risk of incident hematological disease and mortality. *Blood Adv*. 2021 Sep 14;5(17):3266-3278.
  21. Beauchamp EM, Leventhal M, Bernard E, Hoppe ER, Todisco G, Creignou M, Galli A, Castellano CA, McConkey M, Tarun A, Wong W, Schenone M, Stancliff C, Tanenbaum B, Malolepsza E, Nilsson B, Bick AG, Weinstock JS, Miller M, Niroula A, Dunford A, Taylor-Weiner A, Wood T, Barbera A, Anand S, Psaty BM, Desai P, Cho MC, Johnson AD, Loos R, NHLBI Trans-Omics for Precision Medicine (TOPMed) Consortium, MacArthur DG, Lek M, Exome Aggregation Consortium, Neuberger DS, Lage K, Carr SA, Hellstrom-Lindberg E, **Malcovati L**, Papaemmanuil E, Stewart C, Getz G, Bradley RK, Jaiswal S, Ebert BL. Identification and characterization of mutations in ZBTB33 in clonal hematopoiesis and myelodysplastic syndromes. *Blood Cancer Discovery* 2021 Sep;2(5):500-517.
  22. Rontautoli S, Castellano S, Guglielmelli P, Zini R, Bianchi E, Genovese E, Carretta C, Parenti S, Fantini S, Mallia S, Tavernari L, Sartini S, Mirabile M, Mannarelli C, Gesullo F, Pacilli A, Pietra D, Rumi E, Salmoiraghi S, Mora B, Villani L, Grilli A, Rosti V, Barosi G, Passamonti F, Rambaldi A, **Malcovati L**, Cazzola M, Biccato S, Tagliafico E, Vannucchi AM, Manfredini R. Gene expression profile correlates with molecular and clinical features in patients with myelofibrosis. *Blood Adv*. 2021 Mar 9;5(5):1452-1462.
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#### ***Pubblicazioni a carattere educativo e didattico***

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3. Orazi A, Hasserjian RP, Cazzola M, Thiele J, **Malcovati L**. Myelodysplastic-myeloproliferative neoplasm with ring sideroblasts and thrombocytosis - Swerdlow SH et al. WHO CLASSIFICATION OF TUMOURS OF HAEMATOPOIETIC AND LYMPHOID TISSUES - International Agency for Research on Cancer (IARC), World Health Organization Classification of Tumours - Lyon (France) 2017 - Chapter 5, 93-94.

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5. Hasserjian RP, Gattermann N, Bennet JM, Brunning RD, **Malcovati L**, Thiele J. Myelodysplastic syndrome with ring sideroblasts - Swerdlow SH et al. WHO CLASSIFICATION OF TUMOURS OF HAEMATOPOIETIC AND LYMPHOID TISSUES - International Agency for Research on Cancer (IARC), World Health Organization Classification of Tumours - Lyon (France) 2017 - Chapter 6, 109-111.
6. **Malcovati L**, Ambaglio I. Profilassi e terapia del sovraccarico di ferro. *Ematologia Oncologica* - Anno 3, Numero 3 - 2016, 62-70.
7. **Malcovati L**, Cazzola M. The shadowlands of MDS: idiopathic cytopenias of undetermined significance (ICUS) and clonal hematopoiesis of indeterminate potential (CHIP). *Hematology Am Soc Hematol Educ Program*. 2015;2015:299-307. doi: 10.1182/asheducation-2015.1.299.
8. Cazzola M, **Malcovati L**. Diagnosis and treatment of sideroblastic anemias: from defective heme synthesis to abnormal RNA splicing. *Hematology Am Soc Hematol Educ Program*. 2015;2015:19-25. doi: 10.1182/asheducation-2015.1.19.
9. **Malcovati L**. Molecular classification of myelodysplastic syndromes. *European Hematology Association Educational Program* 2015: 209-217
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13. **Malcovati L**. Red blood cell transfusion therapy and iron chelation in patients with myelodysplastic syndromes. *Clin Lymphoma Myeloma*. 2009;9 Suppl 3:S305-11
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15. **Malcovati L**, Nimer SD. Myelodysplastic syndromes: diagnosis and staging. *Cancer Control*. 2008 Oct;15 Suppl:4-13.
16. Della Porta MG, **Malcovati L**. Sindromi Mielodisplastiche. *Ematologia Pratica* (ISSN 1723-1035) - Elsevier - Anno IV - Numero 11, Settembre 2006
17. **Malcovati L**. Impact of transfusion dependency and secondary iron overload on the survival of patients with myelodysplastic syndromes. *Leuk Res*. 2007 Dec;31 Suppl 3:S2-6.
18. **Malcovati L**. Defects in Iron Metabolism and Iron Overload in MDS, in *Myelodysplastic Syndromes: Pathobiology and Clinical Management*, Second Edition. Edited by David P. Steensma. Published by Informa Healthcare USA, Inc.
19. **Malcovati L**, Bowen DT, Hellstrom-Lindberg E. Management of Cytopenias in MDS, in *Myelodysplastic Syndromes: Pathobiology and Clinical Management*, Second Edition. Editor David P. Steensma. Published by Informa Healthcare USA, Inc.
20. Hellstrom-Lindberg E, **Malcovati L**. Management of anemia, transfusion therapy, and growth factors, in *Myelodysplastic Syndromes: State of the Art*. Editor Eva Hellstrom-Lindberg. Published by Remedica, UK.

#### ORGANIZZAZIONE, DIREZIONE E COORDINAMENTO DI CENTRI O GRUPPI DI RICERCA NAZIONALI E INTERNAZIONALI O PARTECIPAZIONE AGLI STESSI

Il Prof. Luca Malcovati è stato selezionato come membro o coordinatore nell'ambito dei seguenti gruppi e istituzioni scientifiche internazionali e nazionali:

- **Membro del Clinical Advisory Committee per la revisione della Classificazione WHO delle Neoplasie Mieloidi (2016-2021)**. Attestano l'attività le seguenti pubblicazioni:
- Orazi A, Hasserjian RP, Cazzola M, Thiele J, **Malcovati L**. *Myelodysplastic-myeloproliferative neoplasm with ring sideroblasts and thrombocytosis* - Swerdlow SH et al. WHO CLASSIFICATION OF TUMOURS OF HAEMATOPOIETIC AND LYMPHOID TISSUES - International Agency for Research on Cancer (IARC), World Health Organization Classification of Tumours - Lyon (France) 2017 - Chapter 5, 93-94.

- Orazi A, Bennet JM, Bain BJ, Baumann I, Thiele J, Bueso-Ramos C, **Malcovati L**. *Myelodysplastic-myeloproliferative neoplasm, unclassifiable* - Swerdlow SH et al. **WHO CLASSIFICATION OF TUMOURS OF HAEMATOPOIETIC AND LYMPHOID TISSUES** - International Agency for Research on Cancer (IARC), World Health Organization Classification of Tumours - Lyon (France) 2017 - Chapter 5, 95-96.
- Hasserjian RP, Gattermann N, Bennet JM, Brunning RD, **Malcovati L**, Thiele J. *Myelodysplastic syndrome with ring sideroblasts* - Swerdlow SH et al. **WHO CLASSIFICATION OF TUMOURS OF HAEMATOPOIETIC AND LYMPHOID TISSUES** - International Agency for Research on Cancer (IARC), World Health Organization Classification of Tumours - Lyon (France) 2017 - Chapter 6, 109-111.
- **Membro del Committee per la International Classification of Myeloid Neoplasms and Acute Leukemia (dal 05/05/2021 ad oggi)**. Attesta l'attività la seguente pubblicazione:
  - Arber DA, Orazi A, Hasserjian RP, Borowitz MJ, Calvo KR, Kvasnicka HM, Wang SA, Bagg A, Barbui T, Branford S, Bueso-Ramos CE, Cortes J, Dal Cin P, DiNardo CD, Dombret H, Duncavage EJ, Ebert BL, Estey E, Facchetti F, Foucar K, Gangat N, Gianelli U, Godley LA, Goekbuget N, Gotlib JR, Hellström-Lindberg E, Hobbs G, Hoffman R, Jabbour EJ, Kiladjian JJ, Larson RA, Le Beau MM, Loh ML, Löwenberg B, Macintyre EA, **Malcovati L**, Mullighan CG, Niemeyer CM, Odenike O, Ogawa S, Orfao A, Papaemmanuil E, Passamonti F, Porkka K, Pui CH, Radich JP, Reiter A, Rozman M, Rudelius M, Savona MR, Schiffer C, Schmitt-Graeff A, Shimamura A, Sierra J, Stock W, Stone RM, Tallman MS, Thiele J, Tien HF, Tzankov A, Vannucchi AM, Vyas P, Wei AH, Weinberg OK, Wierzbowska A, Cazzola M, Döhner H, Tefferi A. *International Consensus Classification of Myeloid Neoplasms and Acute Leukemia: Integrating Morphological, Clinical, and Genomic Data*. Blood. 2022 Jun 29;blood.2022015850. doi: 10.1182/blood.2022015850. Epub ahead of print. PMID: 35767897.
- **Chair (dal 01-06-2022 a oggi) e Coordinatore Nazionale (dal 30-03-2009 a oggi) dello European Registry of Myelodysplastic Syndromes** (<http://www.eumds.org/>).
- **Chair del Work-Package 8 - Myelodysplastic Syndromes - e membro dello Steering Committee dello European LeukemiaNet** (<https://www.leukemia-net.org/>) (dal 15/03/2022 ad oggi).
- **Membro della Task Force e coordinatore del Work-Package Myelodysplastic Syndromes and Myelodysplastic/myeloproliferative Neoplasms della European Hematology Association per la definizione degli obiettivi strategici di ricerca nelle neoplasie mieloidi**. Attesta l'attività la seguente pubblicazione:
  - Döhner H, **Malcovati L**, Ossenkoppele GJ, Hochhaus A, Maria Vannucchi A, Bullinger L, Cervantes F, Craddock C, de Witte T, Döhner K, Dombret H, Fenaux P, Geissler J, Germing U, Guilhot F, Harrison C, Hellström-Lindberg E, Passamonti F, Sierra J, Skoda R, Wierzbowska A. The EHA Research Roadmap: Malignant Myeloid Diseases. Hemasphere. 2021 Aug 26;5(9):e635.
- **Coordinatore del programma dello European LeukemiaNet- Development and update of evidence and consensus-based recommendations for the diagnosis and treatment of myelodysplastic syndromes and chronic myelomonocytic leukemia in adults (dal 26-10-2005 ad oggi)**. Attestano l'attività le seguenti pubblicazioni:
  - **Malcovati L**, Hellström-Lindberg E, Bowen D, Adès L, Cermak J, Del Cañizo C, Della Porta MG, Fenaux P, Gattermann N, Germing U, Jansen JH, Mittelman M, Mufti G, Platzbecker U, Sanz GF, Selleslag D, Skov-Holm M, Stauder R, Symeonidis A, van de Loosdrecht AA, de Witte T, Cazzola M; European Leukemia Net. Diagnosis and treatment of primary myelodysplastic syndromes in adults: recommendations from the European LeukemiaNet. Blood. 2013 Oct 24;122(17):2943-64. doi: 10.1182/blood-2013-03-492884 (I.F. 2020: 22.113 - WoS Highly cited article).
  - Itzykson R, Fenaux P, Bowen D, Cross NCP, Cortes J, De Witte T, Germing U, Onida F, Padron E, Platzbecker U, Santini V, Sanz GF, Solary E, Van de Loosdrecht A, **Malcovati L**. Diagnosis and Treatment of Chronic Myelomonocytic Leukemias in Adults: Recommendations From the European Hematology Association and the European LeukemiaNet. Hemasphere. 2018 Nov 29;2(6):e150.
- **Membro dello Strategic and Scientific Board di EUROBLOODNET- EUROPEAN REFERENCE NETWORK for Rare Hematological Disorders - European Commission, Health Programme - European Reference Network (ERN)-2016 - Coordinatore del Transversal Field of Action - Best practices (dal 10-03-2017 a oggi)**. Il network, istituito nell'ambito di un bando competitivo della Commissione Europea, ha come obiettivo primario il miglioramento dell'assistenza sanitaria ai pazienti con malattie ematologiche rare neoplastiche e non neoplastiche a livello europeo. Il programma è articolato in cinque ambiti (Transversal Fields of Action): 1. Cross border health; 2. Best practices; 3. Continuing medical education; 4. Telemedicine; 5. Clinical trials and research. Il TFA 2 on Best Practices ha come obiettivo lo sviluppo,

la disseminazione e la valutazione dell'implementazione di linee guida diagnostiche e terapeutiche nelle malattie ematologiche (<https://www.eurobloodnet.eu/>).

- **Membro del Clinical Genome Program (ClinGen) - Myeloid Malignancies, National Institutes of Health (NIH)** (<https://www.clinicalgenome.org/>) (dal 23/02/2017 ad oggi). Il programma è finalizzato allo sviluppo di un database di riferimento sulla rilevanza clinica di geni e sull'annotazione e interpretazione di varianti genomiche che supporti la medicina di precisione. In particolare, gli obiettivi di questo programma comprendono la costruzione di database centralizzati di dati genetici e clinici a scopo clinico e di ricerca, la standardizzazione di annotazione e interpretazione di varianti genomiche, l'implementazione di evidenza scientifica e consenso tra esperti per la catalogazione di geni e varianti, la valutazione della "medical actionability" di geni e varianti, la disseminazione di conoscenza e lo sviluppo di risorse cliniche e scientifiche accessibili.

- **Coordinatore del Work-Package - Outcome Prediction del Programma HORIZON 2020 - Call: H2020-PHC-2014 - Providing the right care to the right patient with MyeloDysplastic Syndrome at the right time (MDS-RIGHT)** (<https://mds-europe.eu/>) (dal 01-05-2015 al 31/10/2020). Attestano l'attività le seguenti pubblicazioni:

- van Zeventer IA, de Graaf AO, Wouters HJCM, van der Reijden BA, van der Klauw MM, de Witte T, Jonker MA, Malcovati L, Jansen JH, Huls G. Mutational spectrum and dynamics of clonal hematopoiesis in anemia of older individuals. *Blood*. 2020 Apr 2;135(14):1161-1170.

- van Zeventer IA, de Graaf AO, Koorenhof-Scheele TN, van der Reijden BA, van der Klauw MM, Dinmohamed AG, Diepstra A, Schuringa JJ, Malcovati L, Huls G, Jansen JH. Monocytosis and its association with clonal hematopoiesis in community-dwelling individuals. *Blood Adv*. 2022 Jul 26;6(14):4174-4184.

- van Zeventer IA, de Graaf AO, van der Klauw MM, Vellenga E, van der Reijden BA, Schuringa JJ, Diepstra A, Malcovati L, Jansen JH, Huls G. Peripheral blood cytopenias in the aging general population and risk of incident haematological disease and mortality. *Blood Adv*. 2021 Sep 14;5(17):3266-3278.

- **Membro del comitato di coordinamento del programma di European Society for Blood and Marrow Transplantation, European LeukemiaNet, Blood and Marrow Transplant Clinical Trial Group and the International Myelodysplastic Syndromes Foundation - Recommendations for allogeneic hematopoietic cell transplantation for myelodysplastic syndrome and chronic myelomonocytic leukemia.** Attesta l'attività la seguente pubblicazione:

- de Witte T, Bowen D, Robin M, Malcovati L, Niederwieser D, Yakoub-Agha I, Mufti GJ, Fenaux P, Sanz G, Martino R, Alessandrino EP, Onida F, Symeonidis A, Passweg J, Kobbe G, Ganser A, Platzbecker U, Finke J, van Gelder M, van de Loosdrecht AA, Ljungman P, Stauder R, Volin L, Deeg HJ, Cutler C, Saber W, Champlin R, Giralt S, Anasetti C, Kröger N. Allogeneic hematopoietic stem cell transplantation for MDS and CMML: recommendations from an international expert panel. *Blood*. 2017 Mar 30;129(13):1753-1762.

- **Membro del Panel della EU-US multicenter cooperative initiative to standardize parameters of disease and diagnostics for practice and clinical trials in patients with MDS.** Attesta l'attività la seguente pubblicazione:

- Valent P, Orazi A, Steensma DP, Ebert BL, Haase D, Malcovati L, van de Loosdrecht AA, Haferlach T, Westers TM, Wells DA, Giagounidis AA, Loken M, Orfao A, Lübbert M, Ganser A, Hofmann WK, Ogata K, Schanz J, Béné MC7, Hoermann G, Sperr WR, Sotlar K, Bettelheim P, Stauder R, Pfeilstöcker, Horny HP, Germing U, Greenberg P and Bennett JM. Proposed minimal diagnostic criteria for myelodysplastic syndromes (MDS) and potential pre-MDS conditions. *Oncotarget*. 2017 Jul 5;8(43):73483-73500.

- Valent P, Orazi A, Savona MR, Patnaik MM, Onida F, van de Loosdrecht AA, Haase D, Haferlach T, Elena C, Pleyer L, Kern W, Pemovska T, Vladimer GI, Schanz J, Keller A, Lübbert M, Lion T, Sotlar K, Reiter A, De Witte T, Pfeilstöcker M, Geissler K, Padron E, Deininger M, Orfao A, Horny HP, Greenberg PL, Arber DA, Malcovati L, Bennett JM. Proposed diagnostic criteria for classical chronic myelomonocytic leukemia (CMML), CMML variants and pre-CMML conditions. *Haematologica*. 2019 Oct;104(10):1935-1949.

- **Membro del Panel dell'International Working Group per la definizione di Response criteria for myelodysplastic syndromes (MDS) and myelodysplastic/myeloproliferative neoplasms (MDS/MPN) in adults.** Attesta l'attività la seguente pubblicazione:

- Savona MR, Malcovati L, Komrokji R, Tiu RV, Mughal TI, Orazi A, Kiladjian JJ, Padron E, Solary E, Tibes R, Itzykson R, Cazzola M, Mesa R, Maciejewski J, Fenaux P, Garcia-Manero G, Gerds A, Sanz G, Niemeyer CM, Cervantes F, Germing U, Cross NC, List AF; MDS/MPN International Working Group. An international consortium proposal of uniform response criteria for myelodysplastic/myeloproliferative neoplasms (MDS/MPN) in adults. *Blood*. 2015 Mar 19;125(12):1857-65.

- Platzbecker U, Fenaux P, Adès L, Giagounidis A, Santini V, van de Loosdrecht AA, Bowen D, de Witte T, Garcia-Manero G, Hellström-Lindberg E, Germing U, Stauder R, **Malcovati L**, Sekeres MA, Steensma DP, Gloaguen S. Proposals for revised IWG 2018 hematological response criteria in patients with MDS included in clinical trials. *Blood*. 2019 Mar 7;133(10):1020-1030.

- **Membro dello European Competence Network on Mastocytosis** (<https://ecnm.meduniwien.ac.at/>) (dal 01/01/2017 a oggi). Attestano l'attività le seguenti pubblicazioni:

- Zanotti R, Bonifacio M, Lucchini G, Sperr WR, Scaffidi L, van Anrooij B, Oude Elberink HN, Rossignol J, Hermine O, Gorska A, Lange M, Hadzijusufovic E, Miething C, Müller S, Perkins C, Shomali W, Elena C, Illerhaus A, Jawhar M, Parente R, Caroppo F, Solomianyi O, Zink A, Mattsson M, Yavuz AS, Panse J, Varkonyi J, Doubek M, Sabato V, Breynaert C, Vucinic V, Schug T, Häggglund H, Wortmann F, Brockow K, Angelova-Fischer I, Belloni Fortina A, Triggiani M, Reiter A, Hartmann K, **Malcovati L**, Gotlib J, Shoumariyeh K, Niekisz M, Arock M, Kluin-Nelemans HC, Bonadonna P, Valent P. Refined diagnostic criteria for bone marrow mastocytosis: a proposal of the European competence network on mastocytosis. *Leukemia*. 2022 Feb;36(2):516-524.

- Trizuljak J, Sperr WR, Nekvindová L, Elberink HO, Gleixner KV, Gorska A, Lange M, Hartmann K, Illerhaus A, Bonifacio M, Perkins C, Elena C, **Malcovati L**, Fortina AB, Shoumariyeh K, Jawhar M, Zanotti R, Bonadonna P, Caroppo F, Zink A, Triggiani M, Parente R, von Bubnoff N, Yavuz AS, Häggglund H, Mattsson M, Panse J, Jäkel N, Kilbertus A, Hermine O, Arock M, Fuchs D, Sabato V, Brockow K, Bretterklieber A, Niekisz M, van Anrooij B, Reiter A, Gotlib J, Kluin-Nelemans HC, Mayer J, Doubek M, Valent P. Clinical features and survival of patients with indolent systemic mastocytosis defined by the updated WHO classification. *Allergy*. 2020 Aug;75(8):1927-1938.

- Valent P, Oude Elberink JNG, Gorska A, Lange M, Zanotti R, van Anrooij B, Bonifacio M, Bonadonna P, Gleixner KV, Hadzijusufovic E, Perkins C, Hartmann K, Illerhaus A, Merante S, Elena C, Shoumariyeh K, von Bubnoff N, Parente R, Triggiani M, Schwaab J, Jawhar M, Caroppo F, Fortina AB, Brockow K, David Fuchs, Greul R, Yavuz AS, Doubek M, Mattsson M, Häggglund H, Panse J, Sabato V, Aberer E, Al-Ali HK, Morren MA, Varkonyi J, Zink A, Niekisz M, Niederwieser D, **Malcovati L**, Reiter A, Kennedy V, Gotlib J, Lortholary O, Hermine O, Arock M, Kluin-Nelemans H, Sperr WR; Study Group of the European Competence Network on Mastocytosis (ECNM). The Data Registry of the European Competence Network on Mastocytosis (ECNM): Set Up, Projects, and Perspectives. *J Allergy Clin Immunol Pract*. 2019 Jan;7(1):81-87.

- **Membro del Panel Guideline Project for Myelodysplastic Syndromes - Società Italiana di Ematologia (SIE).**

- **Membro del Panel per la redazione delle Linee Guida per la Leucemia Mielomonocitica Cronica della Società Italiana di Ematologia (SIE), Società Italiana di Ematologia Sperimentale (SIES), Gruppo Italiano Trapianto di Midollo Osseo (GITMO).** Attesta l'attività la seguente pubblicazione:

- Onida F, Barosi G, Leone G, **Malcovati L**, Morra E, Santini V, Specchia G, Tura S. Management recommendations for chronic myelomonocytic leukemia: consensus statements from the SIE, SIES, GITMO groups. *Haematologica*. 2013 Sep;98(9):1344-52.

- **Membro del Chronic Myeloid Disorders Working Group dell'International Cancer Genome Consortium** (<http://icgc.org/icgc/cgp/64/508/70117>) (dal 23-09-2010 a oggi). Attestano l'attività le seguenti pubblicazioni:

- Papaemmanuil E, Cazzola M, Boulton J, **Malcovati L**, Vyas P, Bowen D, Pellagatti A, Wainscoat JS, Hellstrom-Lindberg E, Gambacorti-Passerini C, Godfrey AL, Rapado I, Cvejic A, Rance R, McGee C, Ellis P, Mudie LJ, Stephens PJ, McLaren S, Massie CE, Tarpey PS, Varela I, Nik-Zainal S, Davies HR, Shlien A, Jones D, Raine K, Hinton J, Butler AP, Teague JW, Baxter EJ, Score J, Galli A, Della Porta MG, Travaglino E, Groves M, Tauro S, Munshi NC, Anderson KC, El-Naggar A, Fischer A, Mustonen V, Warren AJ, Cross NC, Green AR, Futreal PA, Stratton MR, Campbell PJ; Chronic Myeloid Disorders Working Group of the International Cancer Genome Consortium. Somatic SF3B1 mutation in myelodysplasia with ring sideroblasts. *N Engl J Med*. 2011 Oct 13;365(15):1384-95.

- **Malcovati L**, Papaemmanuil E, Bowen DT, Boulton J, Della Porta MG, Pascutto C, Travaglino E, Groves MJ, Godfrey AL, Ambaglio I, Galli A, Da Via MC, Conte S, Tauro S, Keenan N, Hyslop A, Hinton J, Mudie LJ, Wainscoat JS, Futreal PA, Stratton MR, Campbell PJ, Hellström-Lindberg E, Cazzola M; Chronic Myeloid Disorders Working Group of the International Cancer Genome Consortium and of the Associazione Italiana per la Ricerca sul Cancro Gruppo Italiano Malattie Mieloproliferative. Clinical significance of SF3B1 mutations in myelodysplastic syndromes and myelodysplastic-myeloproliferative neoplasms. *Blood*. 2011 Dec 8;118(24):6239-46.

- Papaemmanuil E, Gerstung M, **Malcovati L**, Tauro S, Gundem G, Van Loo P, Yoon CJ, Ellis P, Wedge DC, Pellagatti A, Shlien A, Groves MJ, Forbes SA, Raine K, Hinton J, Mudie LJ, McLaren S, Hardy C, Latimer C,



Della Porta MG, O'Meara S, Ambaglio I, Galli A, Butler AP, Walldin G, Teague JW, Quek L, Sternberg A, Gambacorti-Passerini C, Cross NC, Green AR, Boultonwood J, Vyas P, Hellstrom-Lindberg E, Bowen D, Cazzola M, Stratton MR, Campbell PJ; Chronic Myeloid Disorders Working Group of the International Cancer Genome Consortium. Clinical and biological implications of driver mutations in myelodysplastic syndromes. *Blood*. 2013 Nov 21;122(22):3616-27 (I.F. 2020: 22.113).

- ICGC/TCGA Pan-Cancer Analysis of Whole Genomes Consortium. Pan-cancer analysis of whole genomes. *Nature*. 2020 Feb;578(7793):82-93.

- **Membro dell'International Working Group for the Prognosis of Myelodysplastic Syndromes (IWG-PM) e dell'International Working Group for Myelodysplastic/Myeloproliferative Neoplasms (IWG-MDS/MPN) (dal 15-11-2010 a oggi).** Attestano l'attività le seguenti pubblicazioni:

- Greenberg PL, Tuechler H, Schanz J, Sanz G, Garcia-Manero G, Solé F, Bennett JM, Bowen D, Fenaux P, Dreyfus F, Kantarjian H, Kuendgen A, Levis A, **Malcovati L**, Cazzola M, Cermak J, Fonatsch C, Le Beau MM, Slovak ML, Krieger O, Luebbert M, Maciejewski J, Magalhaes SM, Miyazaki Y, Pfeilstöcker M, Sekeres M, Sperr WR, Stauder R, Tauro S, Valent P, Vallespi T, van de Loosdrecht AA, Germing U, Haase D. Revised international prognostic scoring system for myelodysplastic syndromes. *Blood*. 2012 Sep 20;120(12):2454-65.

- Bernard E, Nannya Y, Hasserjian RP, Devlin SM, Tuechler H, Medina-Martinez JS, Yoshizato T, Shiozawa Y, Saiki R, **Malcovati L**, Levine MF, Arango JE, Zhou Y, Solé F, Cargo CA, Haase D, Creignou M, Germing U, Zhang Y, Gundem G, Sarian A, van de Loosdrecht AA, Jädersten M, Tobinsson M, Kosmider O, Follo MY, Thol F, Pinheiro RF, Santini V, Kotsianidis I, Boultonwood J, Santos FPS, Schanz J, Kasahara S, Ishikawa T, Tsurumi H, Takaori-Kondo A, Kiguchi T, Polprasert C, Bennett JM, Klimek VM, Savona MR, Belickova M, Ganster C, Palomo L, Sanz G, Ades L, Della Porta MG, Elias HK, Smith AG, Werner Y, Patel M, Viale A, Vanness K, Neuberg DS, Stevenson KE, Menghrajani K, Bolton KL, Fenaux P, Pellagatti A, Platzbecker U, Heuser M, Valent P, Chiba S, Miyazaki Y, Finelli C, Voso MT, Shih LY, Fontenay M, Jansen JH, Cervera J, Atsuta Y, Gattermann N, Ebert BL, Bejar R, Greenberg PL, Cazzola M, Hellström-Lindberg E, Ogawa S, Papaemmanuil E. Implications of TP53 allelic state for genome stability, clinical presentation and outcomes in myelodysplastic syndromes. *Nat Med*. 2020 Oct;26(10):1549-1556.

- **Malcovati L**, Stevenson K, Papaemmanuil E, Neuberg D, Bejar R, Boultonwood J, Bowen DT, Campbell PJ, Ebert BL, Fenaux P, Haferlach T, Heuser M, Jansen JH, Komrokji RS, Maciejewski JP, Walter MJ, Fontenay M, Garcia-Manero G, Graubert TA, Karsan A, Meggendorfer M, Pellagatti A, Sallman DA, Savona MR, Sekeres MA, Steensma DP, Tauro S, Thol F, Vyas P, Van de Loosdrecht AA, Haase D, Tüchler H, Greenberg PL, Ogawa S, Hellstrom-Lindberg E, Cazzola M. SF3B1-mutant MDS as a distinct disease subtype: a proposal from the International Working Group for the Prognosis of MDS. *Blood*. 2020 Jul 9;136(2):157-170.

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## RESPONSABILITA' SCIENTIFICA PER PROGETTI DI RICERCA INTERNAZIONALI E NAZIONALI, AMMESSI AL FINANZIAMENTO SULLA BASE DI BANDI COMPETITIVI

Il Prof. Luca Malcovati è responsabile dei seguenti progetti di ricerca internazionali e nazionali, ammessi al finanziamento sulla base di bandi competitivi che prevedano la revisione tra pari:

- **ASSOCIAZIONE ITALIANA PER LA RICERCA SUL CANCRO (AIRC) - "Special Program Molecular Clinical Oncology 5 per mille" 2017:** Actionable targets in clonal progression and systemic spreading of myeloid neoplasms (MYNERVA) - **GROUP LEADER** (dal 01-10-2018 al 30-09-2023)

- **Cancer Research UK - Accelerator Award:** Early detection and intervention: Understanding the mechanisms of transformation and resistance of incurable haematological malignancies (Durata: 60 mesi)  
- Ruolo: **PRINCIPAL INVESTIGATOR** (dal 01-12-2018 al 28-02-2022)

- **Fondazione I.R.C.C.S. Policlinico San Matteo, Pavia - PROGETTO RICERCA CORRENTE:** Modelling evolutionary trajectories and targeting aberrant splicing in myeloid neoplasms carrying spliceosome mutations - **PRINCIPAL INVESTIGATOR** (dal 01-04-2021 al 31-03-2023)

- **ASSOCIAZIONE ITALIANA PER LA RICERCA SUL CANCRO (AIRC) - Investigator Grant (IG 2017):** Clonal architecture of myeloid neoplasms with myelodysplasia and effect of age-related and germline predisposition - PRINCIPAL INVESTIGATOR (dal 02-01-2018 al 01-01-2023)
- **Fondazione I.R.C.C.S. Policlinico San Matteo, Pavia - PROGETTO RICERCA CORRENTE:** Dissecting the clonal architecture of myeloid neoplasms and its relationship with age-related and germline predisposition - PRINCIPAL INVESTIGATOR (dal 01-04-2017 al 31-03-2021)
- **3rd Health Programme - Call HP-ERN-2016: European Reference Networks / Framework Partnership Agreements-** EuroBloodNet European Reference Network on haematological diseases - MEMBRO DELLO STRATEGIC AND SCIENTIFIC BOARD e COORDINATORE del TRANSVERSAL FIELD OF ACTION (TFA) - Best practices (dal 10-03-2017 al 10-03-2022)
- **HORIZON 2020 - Call: H2020-PHC-2014** - Providing the right care to the right patient with MyeloDysplastic Syndrome at the right time (MDS-RIGHT) (SEP-210177117) - WORK PACKAGE LEADER (WP4 - Outcome Prediction) (dal 01-05-2015 al 30-04-2020)
- **ASSOCIAZIONE ITALIANA PER LA RICERCA SUL CANCRO (AIRC) - Investigator Grant (IG 2014):** Clinical implications of somatic mutations in myelodysplastic syndromes and myelodysplastic/myeloproliferative neoplasms - PRINCIPAL INVESTIGATOR (dal 01-01-2015 al 31-12-2017)
- **Fondazione I.R.C.C.S. Policlinico San Matteo, Pavia - PROGETTO RICERCA CORRENTE:** Implicazioni cliniche delle mutazioni somatiche nelle sindromi mielodisplastiche e neoplasie mielodisplastiche/mieloproliferative - PRINCIPAL INVESTIGATOR (dal 01-01-2015 a 31-03/2017)
- **FONDAZIONE CARIPLO - Scientific Research in Biomedicine 2010:** Analisi del genoma nelle sindromi mielodisplastiche - RESPONSABILE WORK-PACKAGE (WP no.1 - Characterization of study population, molecular/clinical correlates, and clinical relevance of molecular lesions) (dal 01-01-2011 al 31-12-2013)

Svolge o ha svolto ruolo di collaborazione nei seguenti progetti di ricerca:

- Associazione Italiana per la Ricerca sul Cancro “Special Program Molecular Clinical Oncology 5 per mille” 2010: An integrated platform for molecular studies and clinical trials in chronic myeloproliferative neoplasms (Durata: 60 mesi) - Ruolo: collaboratore.
- Fondazione Guido Berlucchi per la Ricerca sul Cancro 2012: Analisi genomica delle neoplasie mieloidi secondarie a chemio-radioterapia (Durata: 36 mesi) - Ruolo: collaboratore.
- Associazione Italiana per la Ricerca sul Cancro 2009: Molecular basis, prognosis and treatment of myelodysplastic syndromes and myeloproliferative neoplasms (Durata: 36 mesi) - Ruolo: collaboratore.
- PRIN 2010: Coding e non-coding RNA nelle neoplasie mieloproliferative e mielodisplastiche: implicazioni patogenetiche e terapeutiche (Durata: 24 mesi) - Ruolo: collaboratore.
- Fondazione Cariplo 2008: Basi molecolari delle malattie mieloproliferative croniche Philadelphia-negative (Durata: 36 mesi) - Ruolo: collaboratore.
- Associazione Italiana per la Ricerca sul Cancro 2006: Genomic analysis of hematopoietic cells in myelodysplastic syndromes and myeloproliferative disorders (Durata: 36 mesi) - Ruolo: collaboratore.
- PRIN 2004: Genomica e postgenomica dei disordini del metabolismo del ferro (Durata: 24 mesi) - Ruolo: collaboratore titolare di assegno di ricerca.

#### ATTIVITÀ QUALI LA DIREZIONE O LA PARTECIPAZIONE A COMITATI EDITORIALI DI RIVISTE SCIENTIFICHE

Dal gennaio 2003 al 2007 è stato membro del comitato editoriale di **HAEMATOLOGICA**, Official Journal of the European Hematology Association (EHA), Società Italiana di Ematologia (SIE), Società Italiana di Ematologia Sperimentale (SIES) (<http://www.haematologica.org/>), con funzione di Assistant Editor. Dal 2008 al 31-10-2017 ha rivestito l'incarico di Deputy Editor. Dal 01-11-2017 al 30/11/2020 è stato selezionato per l'incarico di Editor-in-Chief.

Dal 2010 al 2012 è stato member dell'EDITORIAL BOARD del JOURNAL OF CLINICAL ONCOLOGY, Official Journal of the American Society of Clinical Oncology (ASCO).

Nel 2017 è stato invitato dalla rivista SEMINARS IN HEMATOLOGY quale Guest Editor per curare il fascicolo July 2017 “Therapies in MDS”.

Ha svolto attività di revisore per molteplici riviste internazionali, tra cui New England Journal of Medicine, British Medical Journal, Journal of Clinical Oncology, Lancet Oncology, Plos Medicine, Blood, Leukemia, Haematologica.

## PREMI E RICONOSCIMENTI NAZIONALI E INTERNAZIONALI PER ATTIVITÀ DI RICERCA

(inserire premio, data, ente organizzatore, ecc.)

Ha ricevuto il National Marrow Donor Program Award per il miglior abstract nella categoria Sindromi Mielodisplastiche al 53th Annual Meeting American Society of Hematology (San Diego, California, 10-13 Dicembre 2011).

Ha ricevuto il Premio Fondazione Federico Calabresi per la ricerca traslazionale in campo ematologico nel 2014 e nel 2017.

Ad attestazione di riconosciuto valore scientifico, è stato selezionato per tenere keynote lectures e relazioni a carattere educativo nei programmi istituzionali dei seguenti congressi internazionali:

- **16th International Congress on Myelodysplastic Syndromes (MDS 2021) (Toronto, Canada, 23-26/09/2021) -OPENING CEREMONY KEYNOTE LECTURE:** MDS today and in 20 years.
- **European Society of Medical Oncology (ESMO) Congress 2020 (18-22/09/2020) - EDUCATIONAL SESSION MYELODYSPLASTIC SYNDROMES:** Biology, diagnosis and classification of MDS.
- **2019 Annual Meeting of the American Society of Clinical Oncology (ASCO) (Chicago, IL, 31 Maggio - 4 Giugno 2019). EDUCATION SESSION -** Approaching Clonal Hematopoiesis: Can You Be Too Precise?
- **29th Congress of the Hellenic Society of Haematology (Thessaloniki, Greece, 1-4/11/2018) - KEYNOTE LECTURE:** Clonal hematopoiesis of indetermined potential and myeloid neoplasms.
- **Czech Society of Haematology Meeting (Prague, Czech Republic, 16-18/09/2018) - PRESIDENTIAL SYMPOSIUM KEYNOTE LECTURE:** Clonal cytopenia and its relationship with myeloid neoplasms.
- **30th Congress of the European Society of Pathology (Bilbao, Spain, 08-12 September 2018) Bone marrow: the diagnostic spectrum of cytopenia -** ICUS, CCUS and CHIP.
- **107th Annual Meeting of the United States and Canadian Academy of Pathology (USCAP) (Vancouver, Canada, 17-23/03/2018) - INVITED SPEAKER** Society for Hematopathology Meeting: Myelodysplastic Syndrome with Ring Sideroblasts.
- **2017 Annual Scientific Meeting of the Haematology Society of Australia and New Zealand (HSANZ), Australia, 29/10-01/11/2017) - INVITED LECTURE OPENING SESSION:** Haematopoiesis aging and the molecular basis of myeloid neoplasms with myelodysplasia: clinical implications.
- **Swiss Society of Hematology Annual Meeting (Bern, Switzerland, 07-08/10/2016) - EDUCATIONAL PROGRAM:** Diagnosis of MDS: current and novel aspects.
- **57th American Society of Hematology (ASH) Annual Meeting & Exposition, Orlando (Florida) (5-8 dicembre 2015) - EDUCATION PROGRAM** Myelodysplastic Syndromes: Evolving Diagnosis and Therapy - The Shadowlands of Myelodysplastic Syndromes: Idiopathic Cytopenias of Undetermined Significance and Clonal Hematopoiesis of Indeterminate Potential.
- **20th Congress European Hematology Association (EHA), Vienna (11-14 giugno 2015) - EDUCATION SESSION -** Myelodysplastic Syndromes: Molecular classification of myelodysplastic syndromes.
- **12th Annual Symposium of the European LeukemiaNet, Mannheim (Germany) (02-04 febbraio 2015) - KEYNOTE LECTURE:** Diagnosis and treatment of primary myelodysplastic syndromes in adults: recommendations from the European LeukemiaNet.
- **LVI Congress of the Spanish Society of Haematology and Hematotherapy (Madrid, Spain, 6-8/11/2014). INVITED LECTURE:** Clinical implications of mutational landscape in myelodysplastic Syndromes.
- **17th Congress of the European Hematology Association (Amsterdam, The Netherlands, 14-17 Giugno 2012). EDUCATION SESSION -** Myelodysplastic Syndromes: Integration of Somatic Mutations in Diagnosis and Risk Assessment in MDS.
- **Congress of the German, Austrian and Swiss Societies of Hematology and Oncology (Stuttgart (Germany, 19-23/10/2012). INVITED SPEAKER:** Biology of splicing - Myelodysplastic Syndrome
- **14th Congress of the European Hematology Association (Berlin, Germany, 4-7 Giugno 2009). EDUCATIONAL DEBATE:** Should patients with myelodysplastic syndrome receive iron chelation therapy?
- **2009 Annual Meeting of the American Society Of Clinical Oncology (ASCO) (29 Maggio - 2 Giugno 2009, Orlando, Florida). CLINICAL PROBLEMS in ONCOLOGY EDUCATION SESSION -** Supportive care Controversies in Hematology: Transfusions, Growth Factors, and Beyond.
- **13th Congress of the European Hematology Association (Copenhagen, Denmark, 12-15 Giugno 2008). MEET-THE-EXPERT SESSION:** The European algorithm for myelodysplastic syndromes treatment.



E' stato inoltre selezionato per tenere keynote lectures e relazioni a carattere educativo nei programmi istituzionali dei seguenti congressi nazionali:

- **47° CONGRESSO NAZIONALE Società Italiana di Ematologia, Roma - SESSIONE EDUCAZIONALE:** Attualità e prospettive nelle sindromi mielodisplastiche - Patogenesi ed evoluzione clonale (7-9/10/2019)
- **119° CONGRESSO NAZIONALE Società Italiana di Medicina Interna (SIMI) (Roma 26-28 Ottobre 2018)**
- **LETTURA:** Emopoiesi clonale nell'anziano: tra anemia, infiammazione e rischio cardiovascolare.
- **XV Congresso Nazionale Società Italiana di Ematologia Sperimentale (SIES) (Rimini, 18-20 ottobre 2018).** SESSIONE ISTITUZIONALE - Genomica, invecchiamento e terapie molecolari.
- **49° CONGRESSO NAZIONALE Società Italiana di Biochimica Clinica - Medicina di Laboratorio** (Firenze, 16-18 ottobre 2017) - Sindromi Mielodisplastiche: classificazione WHO 2016
- **XVIII Congresso Nazionale Società Italiana Genetica Umana (SIGU), Rimini (21-24 ottobre 2015) - EDUCATIONAL SESSION** - Patologie ereditarie dell'eritropoiesi: Anemie da patologie dell'RNA editing
- **XII Congresso Nazionale Società Italiana di Ematologia Sperimentale (Roma, 17-19 ottobre 2012).** SESSIONE ISTITUZIONALE - Simposio EHA: New insights in the molecular basis of myelodysplastic syndromes.

La seguente comunicazione scientifica recensita è stata selezionata per presentazione orale nella **Plenary Scientific Session al 53th Annual Meeting American Society of Hematology** (San Diego, California, 10-13 Dicembre 2011): **L. Malcovati, E. Papaemmanuil, E. Hellström-Lindberg, J. Boulton, D. Bowen, P. Vyas, C. Pascutto, M.G. Della Porta, A. Pellagatti, M.J. Groves, A.L. Godfrey, I. Ambaglio, A. Galli, E. Travaglino, S. Conte, S. Tauro, N. Keenan, A. Hyslop, J. Hinton, L.J. Mudie, C. Gambacorti Passerini, N.C.P. Cross, J.S. Wainscoat, A.R. Green, P.A. Futreal, M.R. Stratton, P.J. Campbell, M. Cazzola. Somatic Mutation of SF3B1, a Gene Encoding a Core Component of RNA Splicing Machinery, in Myelodysplasia with Ring Sideroblasts.**

#### PARTECIPAZIONE IN QUALITÀ DI RELATORE A CONGRESSI E CONVEGNI DI INTERESSE NAZIONALE E INTERNAZIONALE

È stato invitato a tenere relazioni o ha partecipato in qualità di organizzatore in 180 congressi e corsi di formazione nazionali e internazionali per specialisti in ematologia, oncologia, medicina interna, genetica medica, biochimica clinica, medicina generale.

È stato selezionato per tenere keynote lectures, invited lectures e relazioni a carattere educativo nei programmi istituzionali dei seguenti congressi internazionali:

- 16th International Congress on Myelodysplastic Syndromes (MDS 2021) (Toronto, Canada, 23-26/09/2021) - OPENING CEREMONY KEYNOTE LECTURE: MDS today and in 20 years.
- European Society of Medical Oncology (ESMO) Congress 2020 (18-22/09/2020) - EDUCATIONAL SESSION MYELODYSPLASTIC SYNDROMES: Biology, diagnosis and classification of MDS.
- 2019 Annual Meeting of the American Society of Clinical Oncology (ASCO) (Chicago, IL, 31 Maggio - 4 Giugno 2019). EDUCATION SESSION - Approaching Clonal Hematopoiesis: Can You Be Too Precise?
- 15th International Symposium on Myelodysplastic Syndromes (Copenhagen, Denmark, 8-11/05/2019) - INVITED LECTURE: ICUS/CCUS - How to Handle.
- 29th Congress of the Hellenic Society of Haematology (Thessaloniki, Greece, 1-4/11/2018) - KEYNOTE LECTURE: Clonal hematopoiesis of indetermined potential and myeloid neoplasms.
- Czech Society of Haematology Meeting (Prague, Czech Republic, 16-18/09/2018) - PRESIDENTIAL SYMPOSIUM KEYNOTE LECTURE: Clonal cytopenia and its relationship with myeloid neoplasms.
- 30th Congress of the European Society of Pathology (Bilbao, Spain, 08-12 September 2018) Bone marrow: the diagnostic spectrum of cytopenia - ICUS, CCUS and CHIP.
- International Society of Laboratory Hematology (ISLH) annual meeting (Brussels, Belgium, 10-12/05/2018) - INVITED SPEAKER: Update on idiopathic cytopenias of undetermined significance (ICUS) and clonal hematopoiesis of indeterminate potential (CHIP).
- 107th Annual Meeting of the United States and Canadian Academy of Pathology (USCAP) (Vancouver, Canada, 17-23/03/2018) - INVITED SPEAKER Society for Hematopathology Meeting: Myelodysplastic Syndrome with Ring Sideroblasts.
- 2017 Annual Scientific Meeting of the Haematology Society of Australia and New Zealand (HSANZ), Australian and New Zealand Society of Blood Transfusion (ANZSBT) and Australasian Society of Thrombosis and Haemostasis (ASTH) (Sydney, Australia, 29/10-01/11/2017) - INVITED LECTURE OPENING

SESSION: Haematopoiesis aging and the molecular basis of myeloid neoplasms with myelodysplasia: clinical implications.

- 14th International Symposium on Myelodysplastic Syndromes (Valencia, Spain, 03-06/05/2017) - INVITED LECTURE: Risk assessment in CMML.

- Swiss Society of Hematology Annual Meeting (Bern, Switzerland, 07-08/10/2016) - EDUCATIONAL PROGRAM: Diagnosis of MDS: current and novel aspects.

- 57th American Society of Hematology (ASH) Annual Meeting & Exposition, Orlando (Florida) (5-8 dicembre 2015) - EDUCATION PROGRAM Myelodysplastic Syndromes: Evolving Diagnosis and Therapy - The Shadowlands of Myelodysplastic Syndromes: Idiopathic Cytopenias of Undetermined Significance and Clonal Hematopoiesis of Indeterminate Potential.

- 20th Congress European Hematology Association (EHA), Vienna (11-14 giugno 2015) - EDUCATION SESSION - Myelodysplastic Syndromes: Molecular classification of myelodysplastic syndromes.

- 12th Annual Symposium of the European LeukemiaNet, Mannheim (Germany) (02-04 febbraio 2015) - KEYNOTE LECTURE: Diagnosis and treatment of primary myelodysplastic syndromes in adults: recommendations from the European LeukemiaNet.

- LVI Congress of the Spanish Society of Haematology and Hematotherapy (Madrid, Spain, 6-8/11/2014). INVITED LECTURE: Clinical implications of mutational landscape in myelodysplastic Syndromes.

- 12th International Symposium on Myelodysplastic Syndromes (Berlin, Germany, 08-11/05/2013) - INVITED LECTURE: Molecular and clinical features of Refractory Anemia with Ring Sideroblasts associated with marked Thrombocytosis (RARS-T).

- 17th Congress of the European Hematology Association (Amsterdam, The Netherlands, 14-17 Giugno 2012). EDUCATION SESSION - Myelodysplastic Syndromes: Integration of Somatic Mutations in Diagnosis and Risk Assessment in MDS.

- Congress of the German, Austrian and Swiss Societies of Hematology and Oncology (Stuttgart (Germany, 19-23/10/2012). INVITED SPEAKER: Biology of splicing - Myelodysplastic Syndrome.

- The 11th International Symposium on Myelodysplastic Syndromes (Edinburgh, UK, 18-21/05/2011) - INVITED LECTURE: New Prognostic Scores.

- 14th Congress of the European Hematology Association (Berlin, Germany, 4-7 Giugno 2009). EDUCATIONAL DEBATE: Should patients with myelodysplastic syndrome receive iron chelation therapy?

- 2009 Annual Meeting of the American Society Of Clinical Oncology (ASCO) (29 Maggio - 2 Giugno 2009, Orlando, Florida). CLINICAL PROBLEMS in ONCOLOGY EDUCATION SESSION - Supportive care Controversies in Hematology: Transfusions, Growth Factors, and Beyond.

- 10th International Symposium on Myelodysplastic Syndromes (Patras, Greece, 06-09/05/2009) - INVITED LECTURE: Diagnosis and Prognosis - WPSS and Real-Time Prognostic Evaluation.

- 13th Congress of the European Hematology Association (Copenhagen, Denmark, 12-15 Giugno 2008). MEET-THE-EXPERT SESSION: The European algorithm for myelodysplastic syndromes treatment.

- 9th International Symposium on Myelodysplastic Syndromes (Florence, Italy, 16-19/05/2007) - INVITED LECTURE: Novel Diagnostic and Prognostic Tools - WPSS, a dynamic prognostic scoring system for predicting survival and leukemic evolution in myelodysplastic syndromes.

**E' stato inoltre selezionato per tenere keynote lectures e relazioni a carattere educativo nei programmi istituzionali dei seguenti congressi nazionali:**

- 47° CONGRESSO NAZIONALE Società Italiana di Ematologia, Roma - SESSIONE EDUCATIVA: Attualità e prospettive nelle sindromi mielodisplastiche - Patogenesi ed evoluzione clonale (7-9/10/2019)

- 119° CONGRESSO NAZIONALE Società Italiana di Medicina Interna (SIMI) (Roma 26-28 Ottobre 2018) - LETTURA: Emopoiesi clonale nell'anziano: tra anemia, infiammazione e rischio cardiovascolare.

- XV Congresso Nazionale Società Italiana di Ematologia Sperimentale (SIES) (Rimini, 18-20 ottobre 2018). SESSIONE ISTITUZIONALE - Genomica, invecchiamento e terapie molecolari.

- 49° CONGRESSO NAZIONALE Società Italiana di Biochimica Clinica - Medicina di Laboratorio (Firenze, 16-18 ottobre 2017) - Sindromi Mielodisplastiche: classificazione WHO 2016

- XXII Congresso Nazionale Federazione Delle Associazioni Dei Dirigenti Ospedalieri Internisti (FADOI) (Sorrento, 13-16/05/2017) - RELATORE: Attualità e futuro nella terapia delle mielodisplasie.

- XVIII Congresso Nazionale Società Italiana Genetica Umana (SIGU), Rimini (21-24 ottobre 2015) - EDUCATIONAL SESSION - Patologie ereditarie dell'eritropoiesi: Anemie da patologie dell'RNA editing

- XII Congresso Nazionale Società Italiana di Ematologia Sperimentale (Roma, 17-19 ottobre 2012).  
SESSIONE ISTITUZIONALE - Simposio EHA: New insights in the molecular basis of myelodysplastic syndromes.

**Le seguenti comunicazioni scientifiche recensite a primo nome sono state selezionate per presentazione orale a congressi internazionali:**

- **58th Annual Meeting American Society of Hematology (San Diego, California, 3-6 Dicembre 2016)**, L. Malcovati et al. Predictive Value of Mutation Analysis in the Diagnostic Approach to Patients with Unexplained Cytopenia.
- **56th Annual Meeting American Society of Hematology (San Francisco, CA, 06-09/12/2014)**, L. Malcovati et al. Genetic Determinants of Disease Phenotype and Clinical Outcome in Myelodysplastic Syndromes with Ring Sideroblasts
- **53th Annual Meeting American Society of Hematology (San Diego, California, 10-13 Dicembre 2011)**, Plenary Scientific Session: L. Malcovati et al. Somatic Mutation of SF3B1, a Gene Encoding a Core Component of RNA Splicing Machinery, in Myelodysplasia with Ring Sideroblasts.
- **51th Annual Meeting American Society of Hematology (New Orleans, Georgia, 5-8 Dicembre 2009)**: L. Malcovati et al. Mutational Status of TET2, JAK2, and MPL in Refractory Anemia with Ringed Sideroblasts Associated with Marked Thrombocytosis.
- **49th Annual Meeting American Society of Hematology (Atlanta, Georgia, 8-11 Dicembre 2007)**: L. Malcovati et al. Differential Expression of Genes Related to JAK-STAT Pathway Activation or Megakaryocyte Differentiation/Maturation in CD34+ Cells from Patients with Refractory Anemia with Ringed Sideroblasts and Thrombocytosis (RARS-T).
- **48th Annual Meeting American Society of Hematology (Orlando, Florida, 9-12 Dicembre 2006)**: L. Malcovati et al. Granulocyte JAK2(V617F) Mutation Status in Myeloid Neoplasms with Ringed Sideroblasts.
- **47th Annual Meeting American Society of Hematology (Atlanta, Georgia, 10-13 Dicembre 2005)**: L. Malcovati et al. The Effect of Transfusion Dependency and Secondary Iron Overload on Survival of Patients with Myelodysplastic Syndrome.
- **47th Annual Meeting American Society of Hematology (Atlanta, Georgia, 10-13 Dicembre 2005)**: L. Malcovati et al. A WHO Classification-Based Prognostic Scoring System (WPSS) for Predicting Survival in Myelodysplastic Syndromes.
- **9th Congress of the European Hematology Association (Ginevra, Svizzera, 10-13 Giugno 2004)**: L. Malcovati et al. Flow cytometric evaluation of marrow dysplasia in patients with myelodysplastic syndrome.

## **ATTIVITÀ GESTIONALI, ORGANIZZATIVE E DI SERVIZIO**

**INCARICHI DI GESTIONE E IMPEGNI ASSUNTI PRESSO RILEVANTI ENTI PUBBLICI E PRIVATI E ORGANIZZAZIONI SCIENTIFICHE E CULTURALI, OVVERO PRESSO L'ATENEO O ALTRI ATENEI**

- **Membro del Board of Directors della MDS International Foundation** (<https://www.mds-foundation.org/>) (dal 01-01/2017 ad oggi).
- **Membro del Board della European Hematology Association** (<http://www.ehaweb.org/about-eha/eha-board-committees/eha-board/>) (dal 12-06-2011 al 14-06-2015).
- **Membro del Good Governance Committee della European Hematology Association** (<http://www.ehaweb.org/about-eha/eha-board-committees/committees-units/>) (dal 16-06-2013 ad oggi).
- **Membro del Consiglio Direttivo della Società Italiana di Ematologia Sperimentale (SIES)** ([http://www.siesonline.it/pages/consiglio\\_direttivo](http://www.siesonline.it/pages/consiglio_direttivo)) (dal 23-09-2010 ad oggi).
- **Chair del Methodology Working Group e successivamente membro dell'Executive Board del Guideline Committee della European Hematology Association (EHA) per lo sviluppo di linee guida diagnostiche e terapeutiche basate sull'evidenza scientifica per le malattie ematologiche neoplastiche e non neoplastiche** (dal 16-05-2013 al 30/06/2021).
- **Membro della Scientific Working Groups Unit della European Hematology Association** (<http://www.ehaweb.org/about-eha/eha-board-committees/committees-units/>) (dal 05-10-2011 al 30/06/2021).
- **Membro del Board Scientifico del Working Party MDS - Fondazione GIMEMA** (<http://www.gimema.it>) (dal 31-03-2017 ad oggi).

- Membro del Board Scientifico del Progetto Labnet MDS - Fondazione GIMEMA

<https://www.projectlabnet.com>) (dal 19-04-2016 ad oggi).

- Membro dell'Advisory Board del Scientific Program Committee del 14th Congress of the European Hematology Association (dal 04-06-2009 al 07-06-2009), e membro del Scientific Program Committee, 15th and 16th Congress of the European Hematology Association (dal 10-06-2010 al 12-06-2011).

## **ATTIVITÀ CLINICO ASSISTENZIALI**

Dal 2008 svolge attività assistenziale presso la Struttura Complessa di Ematologia, Fondazione IRCCS Policlinico San Matteo, Pavia. L'attività clinica verte sulla diagnosi e cura di malattie ematologiche neoplastiche e non neoplastiche, tra le quali anemie e altre citopenie, neutropenie, piastrinopenie immuno-mediate, disordini del metabolismo del ferro, e neoplasie mieloidi e linfoidi. Dal 01/06/2021 è stato nominato reponsabile dell'Unità Operativa di Ricerca in Precision Onco-Haematology.

L'attività clinica si è particolarmente focalizzata sulle neoplasie mieloidi tra cui sindromi mielodisplastiche, neoplasie mielodisplastiche/mieloproliferative, neoplasie mieloproliferative, leucemie acute mieloidi dell'anziano. Nell'ambito di tali disordini, il Prof. Luca Malcovati ha maturato riconosciuta esperienza nella valutazione diagnostica e nella revisione critica dei reperti diagnostici, nella determinazione del rischio individuale e nella scelta terapeutica.

L'attività clinica nell'ambito delle neoplasie mieloidi ha consentito al Prof. Luca Malcovati di essere selezionato quale Membro del Clinical Advisory Committee della World Health Organization e della International Consensus Classification per la Classificazione delle Neoplasie Mieloidi e leucemie Acute.

Il Prof. Luca Malcovati è inoltre rappresentante istituzionale della Fondazione IRCCS Policlinico San Matteo nello European Reference Network for rare hematological disorders - EuroBloodNet, ed è stato selezionato quale membro dello Strategic and Scientific Board e Coordinatore del Transversal Field of Action - Best practices per i tumori ematologici rari. Tale Network include le malattie ematologiche rare neoplastiche e non neoplastiche (disordini dei globuli rossi, sindromi da insufficienza midollare e disordini emopoietici rari, emocromatosi e altri disordini genetici rari del metabolismo del ferro e della sintesi dell'eme, neoplasie mieloidi, neoplasie linfoidi, disordini rari dell'emostasi), e ha finalità che comprendono la definizione di strategie per l'accesso alle prestazioni sanitarie, l'armonizzazione dei percorsi formativi, la promozione di programmi di consultazione inter-professionale per il miglioramento delle prestazioni sanitarie, lo sviluppo di linee guida per la prevenzione, diagnosi e trattamento delle malattie ematologiche rare, la promozione di programmi di cooperazione per procedure diagnostiche e terapeutiche altamente specialistiche (Transversal Fields of Action).

L'esperienza clinica e traslazionale nell'ambito delle neoplasie mieloidi ha inoltre consentito al Prof. Luca Malcovati di essere selezionato quale Membro del Clinical Genome Program (ClinGen) - Myeloid Malignancies, iniziativa del National Institutes of Health (NIH) finalizzata allo sviluppo di un database di riferimento sulla rilevanza clinica di geni e sull'annotazione e interpretazione di varianti genomiche che supporti la medicina di precisione.

L'attività clinica nell'ambito delle neoplasie mieloidi ha inoltre consentito al Prof. Luca Malcovati di essere selezionato quale Membro dello Steering Committee e Coordinatore Nazionale dello European Registry of Myelodysplastic Syndromes, e quale Work-Package Leader nel Programma Europeo Horizon 2020 - Providing the right care to the right patient with MyeloDysplastic Syndrome at the right time (MDS-RIGHT) (PHC-17-2014), progetto quinquennale volto ad ottimizzare gli interventi assistenziali e terapeutici nei soggetti anziani con sindrome mielodisplastica.

Il Prof. Malcovati è stato inoltre selezionato quale coordinatore del programma della European Hematology Association per lo sviluppo di linee guida diagnostiche e terapeutiche per le malattie ematologiche.

È stato inoltre coordinatore e membro del pannello di esperti per lo sviluppo di linee guida diagnostiche e terapeutiche per le sindromi mielodisplastiche e le neoplasie mielodisplastiche/mieloproliferative:

- **Malcovati L**, Hellström-Lindberg E, Bowen D, Adès L, Cermak J, Del Cañizo C, Della Porta MG, Fenaux P, Gattermann N, Germing U, Jansen JH, Mittelman M, Mufti G, Platzbecker U, Sanz GF, Selleslag D, Skov-Holm M, Stauder R, Symeonidis A, van de Loosdrecht AA, de Witte T, Cazzola M; European Leukemia Net. Diagnosis and treatment of primary myelodysplastic syndromes in adults: recommendations from the European LeukemiaNet. *Blood*. 2013 Oct 24;122(17):2943-64.

- de Witte T, Bowen D, Robin M, **Malcovati L**, Niederwieser D, Yakoub-Agha I, Mufti GJ, Fenaux P, Sanz G, Martino R, Alessandrino EP, Onida F, Symeonidis A, Passweg J, Kobbe G, Ganser A, Platzbecker U,

- Finke J, van Gelder M, van de Loosdrecht AA, Ljungman P, Stauder R, Volin L, Deeg HJ, Cutler C, Saber W, Champlin R, Giral S, Anasetti C, Kröger N. Allogeneic hematopoietic stem cell transplantation for MDS and CMML: recommendations from an international expert panel. *Blood*. 2017 Mar 30;129(13):1753-1762.
- Itzykson R, Fenaux P, Bowen D, Cross NCP, Cortes J, De Witte T, Germing U, Onida F, Padron E, Platzbecker U, Santini V, Sanz GF, Solary E, Van de Loosdrecht A, **Malcovati L**. Diagnosis and Treatment of Chronic Myelomonocytic Leukemias in Adults: Recommendations From the European Hematology Association and the European LeukemiaNet. *Hemasphere*. 2018 Nov 29;2(6):e150.
  - Platzbecker U, Fenaux P, Adès L, Giagounidis A, Santini V, van de Loosdrecht AA, Bowen D, de Witte T, Garcia-Manero G, Hellström-Lindberg E, Germing U, Stauder R, **Malcovati L**, Sekeres MA, Steensma DP, Gloaguen S. Proposals for revised IWG 2018 hematological response criteria in patients with MDS included in clinical trials. *Blood*. 2019 Mar 7;133(10):1020-1030.
  - Savona MR, **Malcovati L**, Komrokji R, Tiu RV, Mughal TI, Orazi A, Kiladjian JJ, Padron E, Solary E, Tibes R, Itzykson R, Cazzola M, Mesa R, Maciejewski J, Fenaux P, Garcia-Manero G, Gerds A, Sanz G, Niemeyer CM, Cervantes F, Germing U, Cross NC, List AF; MDS/MPN International Working Group. An international consortium proposal of uniform response criteria for myelodysplastic/myeloproliferative neoplasms (MDS/MPN) in adults. *Blood*. 2015 Mar 19;125(12):1857-65.
  - Valent P, Orazi A, Savona MR, Patnaik MM, Onida F, van de Loosdrecht AA, Haase D, Haferlach T, Elena C, Pleyer L, Kern W, Pemovska T, Vladimer GI, Schanz J, Keller A, Lübbert M, Lion T, Sotlar K, Reiter A, De Witte T, Pfeilstöcker M, Geissler K, Padron E, Deininger M, Orfao A, Horny HP, Greenberg PL, Arber DA, **Malcovati L**, Bennett JM. Proposed diagnostic criteria for classical chronic myelomonocytic leukemia (CMML), CMML variants and pre-CMML conditions. *Haematologica*. 2019 Oct;104(10):1935-1949.
  - Valent P, Orazi A, Steensma DP, Ebert BL, Haase D, **Malcovati L**, van de Loosdrecht AA, Haferlach T, Westers TM, Wells DA, Giagounidis AA, Loken M, Orfao A, Lübbert M, Ganser A, Hofmann WK, Ogata K, Schanz J, Béné MC, Hoermann G, Sperr WR, Sotlar K, Bettelheim P, Stauder R, Pfeilstöcker, Horny HP, Germing U, Greenberg P and Bennett JM. Proposed minimal diagnostic criteria for myelodysplastic syndromes (MDS) and potential pre-MDS conditions. *Oncotarget*. 2017 Jul 5;8(43):73483-73500.
  - Onida F, Barosi G, Leone G, **Malcovati L**, Morra E, Santini V, Specchia G, Tura S. Management recommendations for chronic myelomonocytic leukemia: consensus statements from the SIE, SIES, GITMO groups. *Haematologica*. 2013 Sep;98(9):1344-52

L'attività clinica è stata in parte svolta nell'ambito ed è tuttora svolta in stretta collaborazione con il Centro Trapianti di Midollo Osseo, con particolare riferimento alla valutazione dell'indicazione a trapianto allogenico di cellule staminali emopoietiche e delle sue modalità, comprensive della tempistica di intervento, della scelta del donatore e del regime di condizionamento e della definizione di strategie integrate di trattamento pre- e post-trapianto. L'approccio analitico e critico a tali problematiche cliniche in ambito trapiantologico è risultato nelle seguenti pubblicazioni:

- de Witte T, Bowen D, Robin M, **Malcovati L**, Niederwieser D, Yakoub-Agha I, Mufti GJ, Fenaux P, Sanz G, Martino R, Alessandrino EP, Onida F, Symeonidis A, Passweg J, Kobbe G, Ganser A, Platzbecker U, Finke J, van Gelder M, van de Loosdrecht AA, Ljungman P, Stauder R, Volin L, Deeg HJ, Cutler C, Saber W, Champlin R, Giral S, Anasetti C, Kröger N. Allogeneic hematopoietic stem cell transplantation for MDS and CMML: recommendations from an international expert panel. *Blood*. 2017 Mar 30;129(13):1753-1762.
- Della Porta MG, Jackson CH, Alessandrino EP, Rossi M, Bacigalupo A, van Lint MT, Bernardi M, Allione B, Bosi A, Guidi S, Santini V, **Malcovati L**, Ubezio M, Milanese C, Todisco E, Voso MT, Musto P, Onida F, Iori AP, Cerretti R, Grillo G, Molteni A, Pioltelli P, Borin L, Angelucci E, Oldani E, Sica S, Pascutto C, Ferretti V, Santoro A, Bonifazi F, Cazzola M, Rambaldi A. Decision analysis of allogeneic hematopoietic stem cell transplantation for patients with myelodysplastic syndrome stratified according to the revised International Prognostic Scoring System. *Leukemia*. 2017 Nov;31(11):2449-2457.
- Koreth J, Pidala J, Perez WS, Deeg HJ, Garcia-Manero G, **Malcovati L**, Cazzola M, Park S, Itzykson R, Ades L, Fenaux P, Jadersten M, Hellstrom-Lindberg E, Gale RP, Beach CL, Lee SJ, Horowitz MM, Greenberg PL, Tallman MS, DiPersio JF, Bunjes D, Weisdorf DJ, Cutler C. Role of reduced-intensity conditioning allogeneic hematopoietic stem-cell transplantation in older patients with de novo myelodysplastic syndromes: an international collaborative decision analysis. *J Clin Oncol*. 2013 Jul 20;31(21):2662-70.
- Alessandrino EP, Porta MG, **Malcovati L**, Jackson CH, Pascutto C, Bacigalupo A, Teresa van Lint M, Falda M, Bernardi M, Onida F, Guidi S, Iori AP, Cerretti R, Marengo P, Pioltelli P, Angelucci E, Oneto R, Ripamonti F, Rambaldi A, Bosi A, Cazzola M; Gruppo Italiano Trapianto di Midollo Osseo (GITMO). Optimal timing of allogeneic hematopoietic stem cell transplantation in patients with myelodysplastic syndrome. *Am J Hematol*. 2013 Jul;88(7):581-8.
- Alessandrino EP, Angelucci E, Cazzola M, Porta MG, Di Bartolomeo P, Gozzini A, **Malcovati L**, Pioltelli P, Sica S, Bosi A. Iron overload and iron chelation therapy in patients with myelodysplastic syndrome

treated by allogeneic stem-cell transplantation: report from the working conference on iron chelation of the Gruppo Italiano Trapianto di Midollo Osseo. Am J Hematol. 2011 Oct;86(10):897-902.

Il Prof. Luca Malcovati è responsabile dei seguenti studi clinici in atto presso la Fondazione IRCCS Policlinico San Matteo:

- Protocol H3B-8800-G000-101: An Open-label, Multicenter Phase 1 Trial to Evaluate the Safety, Pharmacokinetics and Pharmacodynamics of Splicing Modulator H3B-8800 (RVT-2001) for Subjects with Myelodysplastic Syndromes, Acute Myeloid Leukemia, and Chronic Myelomonocytic Leukemia.
- “A Phase 2a/2b, Open-label, Proof of Concept (Phase 2a) and Double-blind, Randomized, Placebo-Controlled (Phase 2b), Multicenter, Efficacy, and Safety Study of AG-946 in Participants With Anemia Due to Lower-Risk Myelodysplastic Syndromes”.
- A Phase 1/2, Open-Label, Multicenter Study of INCB000928 Administered as a Monotherapy in Participants With Anemia Due to Myelodysplastic Syndromes or Multiple Myeloma.
- An Efficacy and Safety Study of Azacitidine Subcutaneous in Combination With Durvalumab (MEDI4736) in Previously Untreated Subjects With Higher-Risk Myelodysplastic Syndromes (MDS) or in Elderly Subjects With Acute Myeloid Leukemia (AML) - Principal Investigator
- The Efficacy and Safety of Oral Azacitidine Plus Best Supportive Care Versus Placebo and Best Supportive Care in Subjects With Red Blood Cell (RBC) Transfusion-Dependent Anemia and Thrombocytopenia Due to International Prognostic Scoring System (IPSS) Low Risk Myelodysplastic Syndrome (MDS) - Principal Investigator
- Study to Evaluate Imetelstat (JNJ-63935937) in Subjects With International Prognostic Scoring System (IPSS) Low or Intermediate-1 Risk Myelodysplastic Syndrome (MDS) - Principal Investigator
- A Phase 3, Double-Blind, Randomized Study To Compare The Efficacy And Safety Of Luspatercept (Ace-536) Versus Placebo For The Treatment Of Anemia Due To Ipss-R Very Low, Low, Or Intermediate Risk Myelodysplastic Syndromes In Subjects With Ring Sideroblasts Who Require Red Blood Cell Transfusions - Principal Investigator
- Architettura clonale delle neoplasia mieloidi con mielodisplasia ed effetto della predisposizione età-correlata e congenita - Principal Investigator
- Multicenter Registry for Patients with Mastocytosis in Europe (<http://ecnm.net/homepage>) - Principal Investigator
- A prospective, multicenter European Registry for newly diagnosed patients with Myelodysplastic Syndromes of IPSS low and intermediate-1 subtypes - Principal Investigator
- Implicazioni cliniche delle mutazioni somatiche nelle sindromi mielodisplatiche e neoplasie mielodisplatiche/mieloproliferative - Principal Investigator

Data

01/09/2022

Luogo

Pavia