

NAME: Achille  
SURNAME: PICH  
PROFESSION: MD, Associate Professor of Pathology  
DATE & PLACE OF BIRTH: June 16, 1949; Nole (Torino), Italy  
CITIZENSHIP: Italian

1974: Degree in Medicine (M.D.).  
1977-85: Assistant Professor of Pathology, Faculty of Medicine, University of Turin.  
1985-2019: Associate Professor of Pathology, Faculty of Medicine, University of Turin.

#### BOARD CERTIFICATION:

1974 Medical License, Italy (summa cum laude)  
1982 Board in General Surgery, Italy (summa cum laude)  
1986 Board in Laboratory Medicine, Italy (summa cum laude)

#### CLINICAL PATHOLOGY ACTIVITY:

1974-present General Clinical Pathology Physician, University of Torino Medical School and “San Giovanni Battista Hospital”, Torino, Italy  
Specialty fields: Hematopathology (Bone marrow)

#### MEMBERSHIP

SIAPEC since 1995.  
IAP since 1988.  
ISPO (International Society for Preventive Oncology) since 1993.  
EBMWG (European Bone Marrow Working Group) since 2007.

2010-2019 Director of the Residency Program in Surgical Pathology of the University of Torino-University of Novara (Eastern Piedmont).

#### REVIEWER

- 1) Acta Haematologica
- 2) Asian Journal of Andrology
- 3) British Journal of Cancer
- 4) British Journal of Haematology
- 5) Clinical and Experimental Medicine
- 6) Clinical Cancer Research
- 7) Current Urology
- 8) European Journal of Haematology
- 9) European Journal of Histochemistry
- 10) Histology and Histopathology
- 11) International Journal of Cancer
- 12) International Journal of Experimental Pathology
- 13) Journal of Clinical Pathology
- 14) Journal of Histochemistry and Cytochemistry
- 15) Lung Cancer International

- 16) Mediterranean Journal of Hematology and Infectious Diseases
- 17) Micron
- 18) Pathology Research and Practice
- 19) Virchows Archiv
- 20) Turkish Journal of Hematology
- 16) Clinical and Experimental Medicine

#### MEMBER OF THE EDITORIAL BOARD

- 1) Oncology Reports
- 2) Case Reports in Pathology

#### SCIENTIFIC ACTIVITY

Research on tumor cell proliferative activity, oncogene expression, hematopathology (especially bone marrow pathology), mammary (especially male breast) and cervical pathology, experimental pathology and angiogenesis.

Main research topics (and major scientific achievements): Identification and localisation of milk proteins in dysplastic and neoplastic mammary lesions. Histological and immunohistochemical characterization and prognosis of male breast cancer. Angiogenic activity of hyperplastic and neoplastic lymphoid tissue. Role of HPV in the evolution of condylomata and dysplasias of the uterine cervix. Prognostic value of the proliferative activity in pharyngeal, bladder, prostate and male breast carcinomas, multiple myeloma and thymoma. Prognostic and predictive value of AgNORs in acute myelogenous leukaemia (Pich et al. J Clin Oncol 16,1512-8,1998, selected for the 2000 Year Book of Pathology) and adult acute lymphoblastic leukemia. Prognostic value of p53 expression in thymoma, lymphoma and male breast carcinoma (Pich et al. J Clin Oncol 18,2948-56,2000, selected as "Article of the day" October 12, 2000 by AMEDEO, The Medical Literature Guide). Prognostic value of the expression of WT1 gene transcript in adult lymphoblastic leukemia. JAK2V617F mutation in RARS-T, chronic myelomonocytic leukaemia and essential thrombocythemia. JAK2V617F, CALR and MPL mutations and bone marrow histology in essential thrombocythaemia. Role of Wiskott–Aldrich syndrome protein (WASP) as a tumor suppressor in T cell lymphoma.

Author and co-author of 197 scientific publications.

#### PUBLICATIONS (Journals with Impact Factor)

1. Bussolati G, Pich A, Alfani V. Immunofluorescence detection of casein in human dysplastic and neoplastic tissues. Virchows Arch A Path Anat 365, 15-21, 1975.
2. Bussolati G, Pich A. Mammary and extramammary Paget's disease. An immunocytochemical study. Am J Pathol 80, 117-128, 1975.

3. Pich A, Bussolati G, Carbonara A. Immunocytochemical detection of casein and casein-like proteins in human tissues.  
*J Histochem Cytochem* 24, 940-947, 1976.
4. Pich A, Bussolati G, Di Carlo F. Production of casein and the presence of estrogen receptors in human breast cancer.  
*J Natl Cancer Inst* 58, 1483-1484, 1977.
5. Eusebi V, Pich A, Macchiorlatti E, Bussolati G. Morpho-functional differentiation in lobular carcinoma of the breast.  
*Histopathology* 1, 247-265, 1977.
6. Navone R, Valpreda M, Pich A. Lymphoid nodules and nodular lymphoid hyperplasia in bone marrow biopsies.  
*Acta Haematol* 74, 19-22, 1985.
7. Pich A, Stramignoni A, Navone R, Lega M, Gullino PM. Angiogenic activity of hyperplastic and neoplastic lymph nodes.  
*Tumori* 74, 7-10, 1988.
8. Pich A, Navone R. Bone marrow involvement in Kaposi's disease. Report of a case.  
*Panminerva Med* 31, 144-147, 1989.
9. Maturri L, Barbolini G, Bauer D, Buffa D, Campesi G, Fante R, Giarelli G, Peruzzo P, Pesce C, Pich A, Stramignoni A, Crenna P, Righetti A. A computer network-based system for local storage and nationwide processing of autopsy diagnoses.  
*Int J Epidemiology* 18, 1-3, 1989.
10. Aloï F, Pich A. Papillary Eccrine Adenoma. A histopathological and immunohistochemical study.  
*Dermatologica* 182, 47-51, 1991.
11. Pich A, Valente G, Margaria E, Azzoni L, Tasso M, Stramignoni A. Argyrophilic nucleolar organizer region counts and Ki67 scores in human renal cell carcinoma.  
*Pathol Res Pract* 187, 482-486, 1991.
12. Pich A, Gastaldi M, Tragni G, Navone R. Lymphocyte subsets in bone marrow lymphoid nodules and malignant lymphoma nodular involvement.  
*Eur J Histochem* 35, 81-91, 1991.
13. Pich A, Pisani P, Krengli M, Cappello N, Navone R. Argyrophilic nucleolar organiser region counts and prognosis in pharyngeal carcinoma.  
*Br J Cancer* 64, 327-332, 1991.
14. Pich A, Aloï F, Margaria E, Tomasini C. AgNOR counts in malignant melanoma associated with benign intradermal nevus.  
*Dermatologica* 183, 246-250, 1991.
15. Pich A, Chiusa L, Marmont F, Cappello N, Navone R. Argyrophilic nucleolar organizer region counts in multiple myeloma: a histopathological study on bone marrow trephine biopsies.  
*Virchows Arch A Pathol Anat* 421, 143-147, 1992.

16. Navone R, Pich A, Fiammotto M, Magnani C. Bone marrow histopathology and prognosis in malignant lymphomas.  
Tumori 78, 176-180, 1992.
17. Pich A, Chiusa L, Pisani P, Krengli M, Pia F, Navone R. Argyrophilic nucleolar organizer region counts and proliferating cell nuclear antigen scores are two reliable indicators of survival in pharyngeal carcinoma.  
J Cancer Res Clin Oncol 119, 106-110, 1992.
18. Pia F, Pich A, Siccardi E, Aloj D, Pisani P, Levi AC. Experimental investigation on histocompatibility of bovine collagen in rat tongue.  
Panminerva Med 34, 163-167, 1992.
19. Pich A, Marmont F, Chiusa L, Cappello N, Resegotti L, Navone R. Argyrophilic nucleolar organizer region counts and prognosis in multiple myeloma.  
Br J Haematol 82, 681-688, 1992.
20. Pich A, Margaria E, Ghiringhello B, Navone R. In situ hybridization for Human Papilloma Virus as a method of predicting the evolution of cervical intraepithelial neoplasia.  
Arch Gynecol Obstet 252, 11-19, 1992.
21. Poli L, Pich A, Zanocchi M, Fonte G, Bo M, Fabris F. Autopsy and multiple pathology in the elderly.  
Gerontology 39, 55-63, 1993.
22. Pich A, Chiusa L, Margaria E, Alois F: Proliferative activity in the malignant cellular blue nevus.  
Hum Pathol 24, 1323-1329, 1993
23. Pich A, Ponti R, Valente G, Chiusa L, Geuna M, Novero D, Palestro G: MIB-1, Ki67 and PCNA scores, and DNA flow cytometry in intermediate grade malignant lymphomas.  
J Clin Pathol 47, 18-22, 1994.
24. Pich A, Chiusa L, Boccadoro M, Marmont F: AgNORs and myeloma prognosis.  
Leukemia Lymphoma 12, 383-394, 1994.
25. Pich A, Chiusa L, Comino A, Navone R. Cell proliferation indices, morphometry and DNA flow cytometry provide objective criteria for distinguishing low and high grade bladder carcinomas.  
Virchows Archiv A Pathol Anat 424, 143-148, 1994.
26. Pich A, Margaria E, Chiusa L. Proliferative activity is a significant prognostic factor in male breast carcinoma.  
Am J Pathol 145, 481-489, 1994.
27. Pich A, Chiarle R, Chiusa L, Palestro G. Argyrophilic nucleolar organizer region counts predict survival in thymoma.  
Cancer 74, 1568-1574, 1994.
28. Pich A, Chiusa L, Margaria E. Role of the argyrophilic nucleolar organizer regions in tumour detection and prognosis.  
Cancer Detect Prev 19, 282-291, 1995.

29. Palestro G, Pich A, Chiusa L, Geuna M, Ponti R, Kerim S, Novero D, Valente G. Biological heterogeneity of diffuse mixed small and large cell non-Hodgkin's lymphomas assessed by DNA flow cytometry and Ki67.  
*Leukemia Lymphoma* 19, 467-472, 1995.
30. Pich A, Chiusa L., Margaria E, Pia F, Navone R. p53 overexpression correlates with proliferative activity and prognosis in carcinomas of the pyriform sinus.  
*Int J Oncology* 6, 1053-1058, 1995.
31. Pich A, Chiarle R, Chiusa L, Ponti R, Geuna M, Casadio C, Maggi G, Palestro G. Long-term survival of thymoma patients by histologic pattern and proliferative activity.  
*Am J Surg Pathol* 19, 918-926, 1995.
32. Marmont F, Pich A, Chiusa L, Locatelli F, Falda M, Boccadoro M, Resegotti L. Correlation between argyrophilic nucleolar organizer region counts and labelling index in multiple myeloma.  
*Eur J Haematol* 56, 39-44, 1996.
33. Aloï F, Pich A, Pippione M. Malignant cellular blue nevus. A clinicopathological study of 6 cases.  
*Dermatology* 192, 36-40, 1996.
34. Pich A, Margaria E, Chiusa L, Ponti R, Geuna M. DNA ploidy and p53 expression correlate with survival and cell proliferative activity in male breast carcinoma.  
*Hum Pathol* 27, 676-682, 1996.
35. Pich A, Chiarle R, Chiusa L, Ponti R, Geuna M, Palestro G. p53 expression and proliferative activity predict survival in non-invasive thymomas.  
*Int J Cancer* 69, 180-183, 1996.
36. Pich A, Chiusa L, Marmont F, Navone R. Risk groups of myeloma patients by histologic pattern and proliferative activity.  
*Am J Surg Pathol* 21, 339-347, 1997.
37. Chiusa L, Galliano D, Formiconi A, Di Primio O, Pich A. High and low risk prostate carcinoma determined by histologic grade and proliferative activity.  
*Cancer* 79, 1956-1963, 1997.
38. Pich A, Margaria E, Chiusa L, Formiconi A. Prognostic value of AgNOR counting. A prospective study in a series of renal cell carcinomas.  
*Oncol Rep* 4, 749-751, 1997.
39. Palestro G, Ponti R, Chiusa L, Chiarle R, Geuna M, Novero D, Freilone R, Pich A. Cell proliferation, bcl-2, c-myc, p53 and apoptosis as indicators of different aggressiveness in small lymphocytic lymphoma (SLL).  
*Eur J Haematol* 59, 148-154, 1997.
40. Pich A, Chiusa L, Audisio E, Marmont F. Nucleolar organizer region counts predict complete remission, remission duration and survival in adult myelogenous leukemia patients.  
*J Clin Oncol* 16, 1512-1518, 1998.

41. Pich A, Margaria E, Chiusa L. Bcl-2 expression in male breast carcinoma. *Virchows Archiv* 433, 229-235, 1998.
42. Pich A. p53 expression, proliferative activity and prognosis in cancer. *Cancer J* 11, 223-228, 1998
43. Palestro G, Novero D, Geuna M, Chiarle R, Chiusa L, Pagano M, Pich A. Role of the perivascular epithelium in the histogenesis of Hassall's corpuscles. A morphologic and immunohistological study. *Int J Surg Pathol* 6, 213-222, 1998.
44. Pich A, Margaria E, Chiusa L, Candelaresi G, Dal Canton O. Androgen receptor expression in male breast carcinoma. Lack of clinicopathological association. *Br J Cancer* 79, 959-964, 1999.
45. Pich A, Chiusa L, Margaria E. Prognostic relevance of AgNORs in tumor pathology. *Micron* 31, 133-141, 2000.
46. Pich A, Margaria E, Chiusa L. Oncogenes and male breast carcinoma: c-erbB-2 and p53 coexpression predicts a poor survival. *J Clin Oncol* 18, 2948-2956, 2000.
47. Margaria E, Chiusa L, Ferrari L, Dal Canton O, Pich A. Therapy and survival in male breast carcinoma: a retrospective analysis of 50 cases. *Oncol Rep* 7, 1035-1039, 2000.
48. Chiusa L, Margaria E, Pich A. Nuclear morphometry in male breast carcinoma: association with cell proliferative activity, oncogene expression, DNA content and prognosis. *Int J Cancer* 89, 494-499, 2000.
49. Pich A, Chiusa L, Formiconi A, Galliano D, Bortolin P, Navone R. Biologic differences between noninvasive papillary urothelial neoplasms of low malignant potential and low-grade (grade 1) papillary carcinomas of the bladder. *Am J Surg Pathol* 25, 1528-1533, 2001.
50. Pich A, Chiusa L, Formiconi A, Galliano D, Bortolin P, Comino A, Navone R. Proliferative activity is the most significant predictor of recurrence in non-invasive papillary urothelial neoplasms of low malignant potential and grade 1 papillary carcinomas of the bladder. *Cancer* 95, 784-790, 2002.
51. Pich A, Margaria E, Chiusa L, Bortolin P, Palestro G. Relationship between AgNORs, MIB-1 and oncogene expression in male breast carcinoma and papillary superficial bladder neoplasm. *Oncol Rep* 10, 1329-1336, 2003.
52. Pich A, Chiusa L, Ceretto C, Fornari A, Audisio E, Marmont F, Navone R. Prognostic value of the rapidity of bone marrow blast cell proliferation in acute lymphoblastic leukemia. *Leukemia* 18, 172-174, 2004.
53. Pich A, Chiusa L, Navone R. Prognostic relevance of cell proliferation in head and neck tumors. *Ann Oncol* 15, 1319-1329, 2004.

54. Pich A, Galliano D. Pure (non-papillary) serous cystadenoma of the epididymis: a histologic and immunohistochemical study.  
*Pathol Res Pract* 201, 65-69, 2005.
55. Chiusa L, Francia di Celle P, Campisi P, Ceretto C, Marmont F, Pich A. Prognostic value of quantitative analysis of WT1 gene transcripts in adult acute lymphoblastic leukemia.  
*Haematologica* 91, 270-271, 2006.
56. Pich A, Fraire F, Fornari A, Davico Bonino L, Godio L, Bortolin P, Chiusa L, Palestro G. Intrasinusoidal bone marrow infiltration and splenic marginal zone lymphoma: a quantitative study.  
*Eur J Haematol* 76, 392-398, 2006.
57. Pich A, Fraire F, Fornari A, Davico Bonino L, Godio L, Bortolin P, Chiusa L, Palestro G. Authors response to Tripodo et al. "Reply to Pich et al.: Intrasinusoidal bone marrow infiltration and splenic marginal zone lymphoma: a quantitative study."  
*Eur J Haematol* 77, 361, 2006.
58. Navone R, Burlo P, Pich A, Pentenero M, Broccoletti R, Marsico A, Gandolfo S. The impact of liquid-based oral cytology on the diagnosis of oral squamous dysplasia and carcinoma.  
*Cytopathology* 18, 356-360, 2007.
59. Pich A, Riera L, Sismondi F, Godio L, Davico Bonino L, Marmont F, Francia di Celle P. JAK2V617F activating mutation is associated with the myeloproliferative type of chronic myelomonocytic leukaemia.  
*J Clin Pathol* 62, 798-801, 2009.
60. Pich A, Godio L. Refractory anaemia with ring sideroblasts associated with marked thrombocytosis (RARS-T) and JAK2V617F mutation transformed to acute myeloid leukaemia with chromosomal evolution including monosomy 7.  
*Leukemia Res* 34, e69-70, 2010.
61. Barreca A, Fornari A, Bonello L, Tondat F, Chiusa L, Lista P, Pich A. KIT and PDGFRA mutations and PDGFRA immunostaining in gastrointestinal stromal tumors.  
*Mol Med Rep* 4: 3-8, 2011
62. Riera L, Lasorsa E, Bonello L, Sismondi F, Tondat F, Francia di Celle P, Chiarle R, Godio L, Pich A, Facchetti F, Ponzoni M, Marmont F, Zanon C, Bardelli A, Inghirami G. Description of a novel Janus kinase 3 P132A mutation in acute megakaryoblastic leukemia and demonstration of previously reported Janus kinase 3 mutations in normal subjects.  
*Leukemia Lymphoma* 52: 1-11, 2011.
63. Pich A, Riera L, Beggiato E, Nicolino B, Godio L, Campisi P, Sismondi F, Francia di Celle P. JAK2V617F mutation and allele burden are associated with distinct clinical and morphological subtypes in patients with essential thrombocythaemia  
*J Clin Pathol* 65:953-5, 2012.
64. Riera L, Marmont F, Toppino D, Frairia C, Sismondi F, Audisio A, Di Bello C, D'Ardia S, Francia Di Celle P, Messa E, Inghirami G, Vitolo U, Pich A. Core binding factor acute myeloid leukaemia and c-KIT mutations.  
*Oncol Rep* 29:1867-1872, 2013.

65. Tabbò F, Ponzoni M, Rabadan R, Bertoni F, Inghirami G; Aliberti S, Barreca A, Bessone L, Crescenzo R, Di Giacomo F, Gaudiano M, Inghirami G, Landra I, Lasorsa E, Machiorlatti R, Mereu E, Messina K, Novero D, Pellegrino E, Pich A, Piva R, Scarfó I, Spaccarotella E, Tabbò F, Todaro M, Ubezzi I, Urigu S, Vittone F, Abage F, Ficarra E, Acquaviva A, Ponzoni M, Stella C, Agostinelli C, Piccaluga PP, Pileri S, Falini B, Tiacci E, Bertoni F, Boi M, Kwee I. European T-cell Lymphoma Study Group. Beyond NPM-anaplastic lymphoma kinase driven lymphomagenesis: alternative drivers in anaplastic large cell lymphoma. *Curr Opin Hematol* 20:374-381, 2013.
66. Lattanzio R, La Sorda R, Facciolo F, Sioletic S, Lauriola L, Martucci R, Gallo E, Palmieri G, Evoli A, Alessandrini G, Ruco L, Rendina EA, Truini M, Chiarle R, Barreca A, Pich A, Ascani S, Remotti D, Tunesi G, Granone P, Ratto GB, Puma F, Pescarmona E, Piantelli M, Marino M; Thymic Epithelial Tumor Working Group, Carlini S, Cerasoli V, Corzani F, Melis E, Filippetti M, Canalini P, Palestro G, Lalle M, Ruffini E, Ceribelli A, Rinaldi M. Thymic epithelial tumors express vascular endothelial growth factors and their receptors as potential targets of antiangiogenic therapy: A tissue micro array-based multicenter study. *Lung Cancer* 85:191-196, 2014
67. Michiels JJ, Pich A, De Raeve H, Gadisseur A. Essential Differences in Clinical and Bone Marrow Features in BCR/ABL-Positive Thrombocythemia Compared to Thrombocythemia in the BCR/ABL-Negative Myeloproliferative Neoplasms Essential Thrombocythemia and Polycythemia Vera. *Acta Haematol* 133:52-55, 2015
68. Riera L, Osella-Abate S, Benevolo G, Beggiato E, Ferrero S, Pich A, Francia di Celle P. Novel CALR somatic mutations in essential thrombocythaemia. *Br J Haematol* 173:797-801, 2016. doi: 10.1111/bjh.13638.
69. Pich A, Godio L, Riera L, Cavaliere C, Kerim S, Bonello L, Francia di Celle P. Myelodysplastic syndrome with del (5q) and JAK2V617F mutation transformed to acute myeloid leukaemia with complex karyotype *Ann Hematol* 2016; 95:525-7. doi: 10.1007/s00277-015-2584-8
70. Pich A, Godio L, Davico Bonino L. p53 protein expression in patients with myelodysplasia treated with allogeneic bone marrow transplantation. *Mol Clin Oncol*. 2017 Jun;6(6):876-880. doi: 10.3892/mco.2017.1225. Epub 2017 Apr 21.
71. Marchiò C, Dell'Orto P, Annaratone L, Geyer FC, Venesio T, Berrino E, Verdun di Cantogno L, Garofoli A, Rangel N, Casorzo L, dell'Aglio C, Gugliotta P, Trisolini E, Beano A, Pietribiasi F, Orlassino R, Cassoni P, Pich A, Montemurro F, Mottolese M, Vincent-Salomon A, Penault-Llorca F, Medico E, Ng CKY, Viale G, Sapino A. The Dilemma of HER2 Double-equivocal Breast Carcinomas: Genomic Profiling and Implications for Treatment. *Am J Surg Pathol*. 2018; 42:1190-1200. doi: 10.1097/PAS.0000000000001100.
72. Pich A, Riera L, Francia di Celle P, Beggiato E, Benevolo G, Godio L. JAK2V617F, CALR, and MPL Mutations and Bone Marrow Histology in Patients with Essential Thrombocythaemia. *Acta Haematol*. 2018;140:234-239. doi: 10.1159/000493970.
73. Menotti M, Ambrogio C, Cheong TC, Pighi C, Mota I, Cassel SH, Compagno M, Wang Q, Dall'Olio R, Minero VG, Poggio T, Sharma GG, Patrucco E, Mastini C, Choudhari R, Pich A, Zamo A, Piva R, Giliani S, Mologni L, Collings CK, Kadoch C, Gambacorti-Passerini C, Notarangelo



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Nat Med 2019; 25:130-140. doi: 10.1038/s41591-018-0262-9. Epub 2018 Dec 3.