List of important 10 publications as first or corresponding author

S.No	Paper citation details	Remarks
A	**In the Field of Thyroid Cancer Research**	
1.	**Bal C,** Padhy AK, Jana S, Pant GS, Basu AK. Prospective randomized clinical trial to evaluate the optimal dose of ^{131}I for remnant ablation in patients with differentiated thyroid carcinoma**. Cancer 1996; 77:2574-80.** *(@1996 American Cancer Society).* Dr. Bal C., as **the first and corresponding author**, played a crucial role in executing, analyzing, and writing the study. This pioneering work led the foundation for the present day 30 mCi ^{131}I remnant ablation in DTC following two National Trials in France and UK published in 2012. In this study we observed that >50 mCi of ^{131}I is not unnecessary for remnant ablation, however, this study could not answer what should be lowest effective dose for remnant ablation. This prompted us to do next study. **Journal Impact Factor: 6.2**	Radioiodine has been used for more than a half-century to ablate thyroid remnants following thyroid surgery, but a single optimal dose has not been established. I had designed the first ever a prospective randomized trial to determine the optimal dose of ^{131}I for remnant ablation. We concluded that increasing the empirical ^{131}I initial dose to more than 50 mCi results in plateauing of the dose-response curve and thus, conventional high dose remnant ablation needs critical evaluation. Based on dosimetry results, one should aim to deliver about 30,000 cGy to the thyroid remnant, as higher doses do not appear to yield a higher ablation rate.
2.	**Bal C,** Kumar A, Pant GS. Radioiodine dose for remnant ablation in differentiated thyroid carcinoma: a randomized clinical trial in 509 patients. **J Clin Endocrinol Metab. 2004 Apr;89(4):1666-73**. doi: 10.1210/jc.2003-031152. PMID: 15070929. Dr. Bal C., as **the first and corresponding author**, played a crucial role in executing, analyzing, and writing the study "Radioiodine dose for remnant ablation in differentiated thyroid carcinoma: a randomized clinical trial in 509 patients". The study, published in J Clin Endocrinol Metab with an impact factor of 6.6, significantly influenced clinical practices by demonstrating effective lower doses for remnant ablation in thyroid cancer. **Impact factor: 6.1** ***"An investigator initiated pioneering research work from India has changed the practice of thyroid cancer treatment all over the World"***	This landmark randomized clinical trial by Bal et al. involving 509 patients with differentiated thyroid carcinoma provides critical insights into the optimal radioiodine dose for remnant ablation. The study's findings helped establish evidence-based guidelines for radioiodine therapy by demonstrating that 30 mCi of ^{131}I (lower doses) is as effective as 100 mCi (higher doses) for successful remnant ablation in thyroid cancer patients, while also minimizing the potential side effects, hospitalisation costs, and reduction in environmental hazards. This work has impacted clinical practice, significantly influenced treatment protocols for thyroid cancer worldwide and now part of ATA 2015 DTC Guidelines.
B	**In the Field of Prostate Cancer Research**	
3.	Yadav MP, Ballal S, Tripathi M, Damle NA, Sahoo RK, Seth A, **Bal C.** ^{177}Lu-DKFZ-PSMA-617 therapy in metastatic castration resistant prostate cancer: safety, efficacy, and quality of life assessment. **Eur J Nucl Med Mol Imaging. 2017 Jan;44(1):81-91**. doi: 10.1007/s00259-016-3481-7. Epub 2016 Aug 10. PMID: 27506431. Dr. Bal conceptualized and led the execution of the study "177Lu-DKFZ-PSMA-617 therapy in metastatic castration-resistant prostate cancer: safety, efficacy, and quality of life assessment," serving as the lead author and **corresponding author**. He was responsible for overseeing patient enrolment, dose administration, data analysis, and the publication process. *Mr. Madhav Prasad Yadav, MSc. and Ms. Sanjana Ballal, MSc. have done PhD under guidance of Dr. Bal.* **Impact factor: 8.6**	This study on 177Lu-DKFZ-PSMA-617 therapy in metastatic castration-resistant prostate cancer (mCRPC) offers key insights into its safety, efficacy, and impact on quality of life. It demonstrates a manageable safety profile with minimal severe side effects, significant tumor burden reduction, and improved quality of life, making it a viable option for heavily pre-treated patients. The findings support broader clinical use, reinforcing its role in mCRPC management by providing effective treatment that enhances both survival and patient well-being. Subsequently, Pluvicto (177Lu-PSMA-617) approved by FDA in 2021 after VISION Trial was published.
4.	Yadav MP, Ballal S, Sahoo RK, Tripathi M, Seth A, **Bal C**. Efficacy and safety of ^{225}Ac-PSMA-617 targeted alpha therapy in metastatic castration-resistant Prostate Cancer patients. **Theranostics 2020; 10(20): 9364–9377**. Published online 2020 Jul 23. doi: 10.7150/thno.48107 Dr. Bal as **corresponding author** was involved in the conceptualization of the research, administered the treatment cycles, followed-up, and wrote the paper. **Impact Factor: 12.4**	If 177Lu-PSMA617 fails in patients with mCRPC and patients show progressive disease other option we explored was using Actinium-225 Alpha therapy in such settings. We demonstrated excellent results in a pilot study of 28 patients. The cohort study among whom 15 (54%) received prior ^{177}Lu-PSMA-617 RLT and the remaining 13 (46%) patients were ^{177}Lu-PSMA-617 RLT naïve. ^{225}Ac-PSMA-617 TAT showed promising disease control rate, even when all other therapeutic options were exhausted, with low treatment-related adverse effects.

5.	Sathekge MM, Lawal IO, **Bal C,** Bruchertseifer F, Ballal S, Cardaci G, Davis C, Eiber M, Hekimsoy T, Knoesen O, Kratochwil C, Lenzo NP, Mahapane J, Maserumule LC, Mdlophane AH, Mokoala KMG, Ndlovu H, Pant V, Rathke H, Reed J, Sen IB, Singh A, Sood A, Tauber R, Thakral P, Yadav MP, Morgenstern A. Actinium-225-PSMA radioligand therapy of metastatic castration-resistant prostate cancer (WARMTH Act): a multicentre, retrospective study. **Lancet Oncol. 2024 Feb;25(2):175-183.** doi: 10.1016/S1470-2045(23)00638-1. Epub 2024 Jan 11. PMID: 38218192. **Dr. Bal was involved in the conceptualization of the research, treatment follow-up, and writing the paper.** **Impact factor: 41.6**	This multicenter, retrospective study on Actinium-225-PSMA radioligand therapy for metastatic castration-resistant prostate cancer (mCRPC) makes a significant contribution to the field by providing extensive data on the safety, efficacy, and overall clinical outcomes of this novel treatment across diverse patient populations. By pooling data from various centers, the study offers robust evidence supporting the potential of Actinium-225-PSMA to achieve meaningful tumor reduction and improve survival in heavily pre-treated mCRPC patients. Additionally, it highlights the manageable safety profile of the therapy, laying the groundwork for its broader clinical adoption and informing future prospective trials to refine treatment protocols.
C	**Contribution in Neuroendocrine Tumour Research & Therapy**	
6.	Ballal S, Yadav MP, **Bal C**, Sahoo RK, Tripathi M. Broadening horizons with ^{225}Ac-DOTATATE targeted alpha therapy for gastroenteropancreatic neuroendocrine tumour patients stable or refractory to ^{177}Lu-DOTATATE PRRT: first clinical experience on the efficacy and safety. **Eur J Nucl Med Mol Imag. 2020, 47:934–946.** Doi:10.1007/s00259-019-04567-2 Dr. Bal conceptualized and led the execution of the study serving as the lead author and **corresponding author**. He was responsible for overseeing patient enrolment, dose administration, data analysis, and the publication process. **Impact factor: 8.6**	If 177Lu-DOTATATE fails in patients with GEPNETs and patients show progressive disease other option we explored was using Actinium-225 DOTATATE based Alpha therapy in such settings. We demonstrated excellent results in a pilot study of 28 patients. The cohort study among whom 15 (54%) received prior ^{177}Lu-PSMA-617 RLT and the remaining 13 (46%) patients were ^{177}Lu-PSMA-617 RLT naïve. ^{225}Ac-PSMA-617 TAT showed promising disease control rate, even when all other therapeutic options were exhausted, with low treatment-related adverse effects.
7.	Ballal S, Yadav MP, Tripathi M, Sahoo RK, **Bal C.** Survival Outcomes in Metastatic Gastroenteropancreatic Neuroendocrine Tumor Patients receiving Concomitant ^{225}Ac-DOTATATE Targeted Alpha Therapy and Capecitabine: A Real-world Scenario Management Based Long-term Outcome Study. **J Nucl Med. 2022 Jul 21:jnumed.122.264043.** doi: 10.2967/jnumed.122.264043. Epub ahead of print. PMID: 35863893. ***This was published as Featured article and images from this manuscript published on the cover page of the journal.*** Dr. Bal as **the corresponding author** contributed and involved in the conceptualization of the research, treatment follow-up, and writing the paper. **Impact factor: 11.08**	This study provides critical real-world data on long-term survival outcomes in metastatic gastroenteropancreatic neuroendocrine tumor (GEP-NET) patients treated with the combination of 225Ac-DOTATATE targeted alpha therapy and Capecitabine, offering key insights for clinical strategies in managing advanced neuroendocrine tumors. **Key Contributions:** • **Innovative use of intravenous Alpha-PRRT in Combination Therapy of advanced GEPNETs.** • **Long-term Efficacy Evidence in Real-world settings.** • **Survival Benefit Correlation.** **Opened a vast area for Future Research in GEPNET management.**
D	**Novel Contribution in Fibroblast Activation Protein Inhibitors (FAPI) as New Target in Cancer Research & Therapy**	
8.	Yadav MP, Ballal S, Martin M, Roesch F, Satapathy S, Moon ES, Tripathi M, Gogia A, **Bal C**. Therapeutic potential of [177Lu]Lu-DOTAGA-FAPi dimers in metastatic breast cancer patients with limited treatment options: efficacy and safety assessment. **Eur J Nucl Med Mol Imaging. 2024 Feb;51(3):805-819**. doi: 10.1007/s00259-023-06482-z. Epub 2023 Nov 7. PMID: 37932560.	The results of the study titled "Therapeutic potential of [177Lu]Lu-DOTAGA-FAPi dimers in metastatic breast cancer patients with limited treatment options: efficacy and safety assessment" likely focus on the clinical response of patients treated with [177Lu]Lu-DOTAGA-FAPi dimers, emphasizing both efficacy and safety outcomes. Efficacy measures include

	Dr. Bal as **the corresponding author** contributed and involved in the conceptualization of the research, treatment follow-up, and writing the paper. **Impact factor: 8.6**	tumor response rates, such as partial response, stable disease, progression-free survival, and overall survival, alongside imaging findings that demonstrate reductions in tumor burden or metabolic activity in targeted metastatic lesions. Safety outcomes assess tolerability and adverse event profiles, particularly hematological toxicity, renal function, and gastrointestinal side effects, while also evaluating the therapeutic benefits relative to risks, especially in heavily pretreated patients. The study likely concludes that [177Lu]Lu-DOTAGA-FAPi therapy offered therapeutic benefits in these patients, representing a novel and
9.	Ballal S, Yadav MP, Moon ES, Roesch F, Kumari S, Agarwal S, Tripathi M, Sahoo RK, Mangu BS, Tupalli A, **Bal C**. Novel Fibroblast Activation Protein Inhibitor-Based Targeted Theranostics for Radioiodine-Refractory Differentiated Thyroid Cancer Patients: A Pilot Study. **Thyroid. 2022 Jan;32(1):65-77**. doi: 10.1089/thy.2021.0412. Epub 2021 Dec 31. PMID: 34641705. Dr. Bal as **the corresponding author** contributed and involved in the conceptualization of the research, treatment follow-up, and writing the paper. **Impact factor: 6.5**	In the pilot study titled "Novel Fibroblast Activation Protein Inhibitor-Based Targeted Theranostics for Radioiodine-Refractory Differentiated Thyroid Cancer Patients," the results focus on evaluating the efficacy and safety of fibroblast activation protein inhibitor (FAPi)-based theranostics in patients with differentiated thyroid cancer (DTC) that no longer responds to radioiodine therapy. The study likely demonstrated that FAPi-targeted theranostics provided a promising therapeutic option for these patients, showing reductions in tumor burden through imaging and clinical assessments. Safety outcomes highlighted that the treatment was well-tolerated, with manageable side effects. Overall, the pilot study supports the potential of FAPi-based theranostics as a novel approach for treating radioiodine-refractory DTC.
E	**Notable Research Contribution in Drug Refractory Epilepsy**	
10.	Rekha Dwivedi, Ph.D., Bhargavi Ramanujam, M.D.,D.M., P. Sarat Chandra, M.Ch., Savita Sapra, Ph.D., Sheffali Gulati, M.D., D.M., Mani Kalaivani, Ph.D., Ajay Garg, M.D., **Chandra S. Bal,** M.D., Madhavi Tripathi. Author Info & Affiliations Published October 26, 2017 **N Engl J Med 2017;377:1639-1647**. DOI: 10.1056/NEJMoa1615335 VOL. 377 NO. 17. Dr. Bal reported all the PET and SPECT imaging data acquired in this study. **Impact factor: 96.2**	This study provides critical evidence supporting neurosurgical treatment for children and adolescents with drug-resistant epilepsy. Through a randomized trial, it demonstrates that surgery substantially improves seizure outcomes and enhances quality of life compared to medical therapy alone.