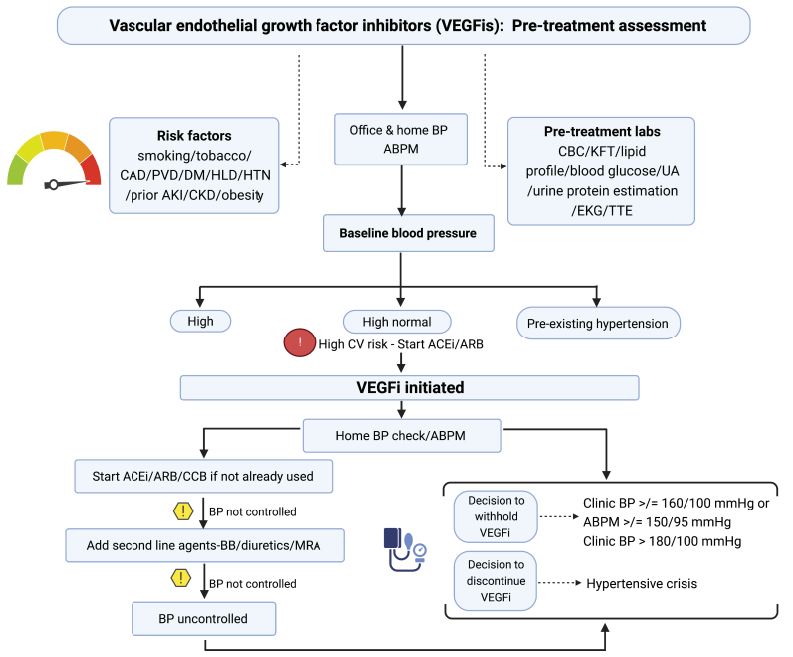
**Figure 3. Approach to management of hypertension from VEGFi**




ABPM, ambulatory blood pressure monitoring; AKI, acute kidney injury; BB, beta blocker; BP, blood pressure; CAD, coronary artery disease; CBC, complete blood count; CCB, calcium channel blocker; CV, cardiovascular; DM, diabetes mellitus; EKG, electrocardiogram; HLD, hyperlipidemia; HTN, hypertension; KFT, kidney function test; MRA, mineralocorticoid receptor antagonist; PVD, peripheral vascular disease; TTE, transthoracic echocardiography; UA, urine analysis. Figure created using Biorender.com.

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# Perspective on Onconephrology from a Cancer Doctor

By Oscar B. Lahoud

In the past decades, the field of hematology-oncology has greatly evolved, bringing to practice the routine use of novel therapies with various mechanisms of action, including chemotherapeutic, immunotherapeutic, and targeted agents, which are often combined into complex regimens (Figure 1).

With these ongoing advances, unique drug-drug interactions, treatment timing, dosing challenges, as well as toxicity profiles have emerged, requiring more advanced expertise from our subspecialty consultants who co-manage these patients. My practice focuses on patients with hematologic malignancies, with a particular interest in plasma cell dyscrasias. These encompass a large spectrum of diseases with unique presentations, a wide range of potential organ involvement, as well as multiple distinct treatment options that combine traditional chemotherapeutic agents with the most novel cellular therapies. Impaired kidney function in a patient with plasma cell dyscrasia could be attributable to any of the following:

- worsening of the disease, leading to monoclonal immunoglobulin deposition in the renal tubules
- amyloid fibrils depositing in the glomeruli, causing nephrotic syndrome
- thrombotic microangiopathy from a calcineurin inhibitor after an allogeneic hematopoietic stem cell transplant
- syndrome of inappropriate anti-diuresis related to the use of an alkylator (cyclophosphamide or melphalan)
- acute interstitial nephritis caused by treatment (e.g., lenalidomide) or other supportive drugs (e.g., anti-microbials and contraindicated non-steroidal anti-inflammatory drug analgesics)
- autoimmune nephritis for a patient in an immunotherapy trial
- complex nephrotoxicity from other chemotherapy (e.g., cisplatin)

The intricacies in determining the cause of kidney dysfunction and optimal course of management demand true experts in the field.

To better serve our most challenging patients, at our institution, we have established monthly, multi-disciplinary amyloidosis tumor boards that include subspecialized hematologists, pathologists, oncocardiologists, and onconephrologists who partake as an integral part of our collective discussion and treatment of patients. On a personal basis, having reliable, devoted onconephrologists working with our group affords us the essential reassurance so that we can focus medical decision-making on the very best personalized therapeutic intervention for our patients, knowing our colleagues will be there to prevent and/or address any potential kidney complication that might arise. Oncologists and general nephrologists alike have come to depend on the expertise of onconephrologists for the elaborate evaluation and management of cancer patients with kidney diseases. Onconephrologists have naturally become an indispensable part of cancer care. As the scope of practice for medical academicians has narrowed down to one's exclusive area of research and clinical proficiency, academic onconephrologists have emerged to lead and work together with other oncologic subspecialists to collaboratively advance the field and enhance the care of the patients we serve. ■

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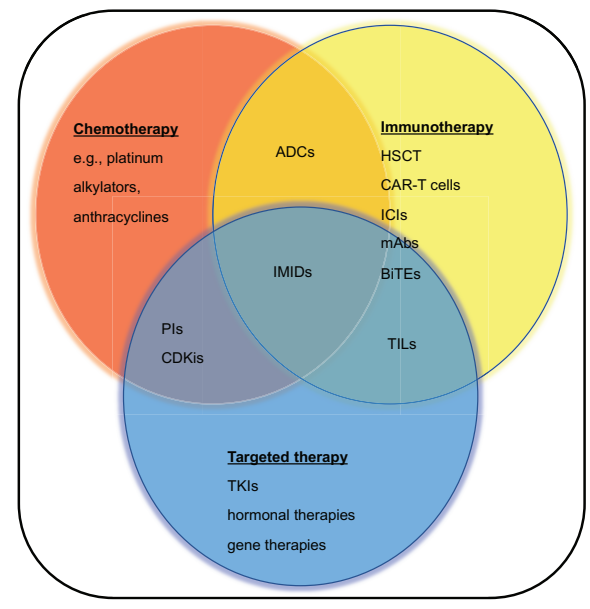
**Figure 1. Examples of cancer-directed therapies**




Therapies include chemotherapy, immunotherapy, and targeted therapies, as well as examples of hybrid agents. ADCs, antibody-drug conjugates; BiTEs, bispecific T-cell engagers; CAR-T cells, chimeric antigen receptor T-cells; CDKis, cyclin-dependent kinase inhibitors; HSCT, hematopoietic stem-cell transplantation; ICIs, immune checkpoint inhibitors; IMIDs, immunomodulating drugs; mAbs, monoclonal antibodies; PIs, proteasome inhibitors; TILs, tumor-infiltrating lymphocytes; TKIs, tyrosine kinase inhibitors.