Quercetin Summary for Intravenous use

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INTRAVENOUS QUERCETIN:

Intravenous Quercetin has studied potential for increased bioavailability [1,2,4] as well as potent potential anti-tumor activity [4-5]. Intravenous data in human subjects shows it to be tolerated and safe [1-3]. Data available suggest multiple mechanisms of action in Tyrosine Kinase inhibition [4] as well as tumor growth suppression [5]. Two years of clinical use has revealed no adverse events when used under standard dose and administration guidelines [3].

INTRAVENOUS USE GUIDELINES:

Dose: [1-4]

- Test dose at 1 mg/kg IV on the first day
- Subsequent doses could increase to 140 mg/kg if tolerated two times weekly
- Generally tolerated doses are between 500 and 1000 mg. 2500 mg have been given IV.

Administration:

- Intravenous dosing via either a central or peripheral line.
    - Use a filtered line or add on filter set
- Carrier solutions:
    - Per compounding pharmacy instructions, usually NS or D5W
    - Dilute not more concentrated than 100 mg per 100 mL solution
- Rate of administration: Start at a rate of 30 minutes per 100 mg and ramp up to tolerance. Tolerance varies greatly.
    - Monitor for signs of nausea which can be the first sign of a non-tolerated dose [3]
    - For allergic / anaphylactic reaction treat per standard protocol.
- Other IV compatibility:
    - Generally incompatible with other IV solutions in the same IV container

Screening:

- Intolerance to oral Quercetin is a caution and may exclude use in the IV setting

- Lab studies:
    - CBC, Chemistry panel (Metabolic panel including electrolytes, bilirubin, AST/ALT/GGT, eGFR/BUN/CRE).

References:

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4. Ferry D R, Smith A, Malkhandi J, et al. Phase I clinical trial of the flavonoid quercetin: pharmacokinetics and evidence for in vivo tyrosine kinase inhibition. Clin Cancer Res 1996;2:659-668.

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